



***Video Cassette Recorder
Model VR512A***

Owner's Manual

*"Finally a VCR manual that
is easy to understand."*

"Yeah - it's written in plain English."



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Product Registration

Mail Your Registration Card Today

A *Product Registration Card* is packed with your VCR. Please fill out the card and return it immediately.

Your prompt submission of this card confirms your right to the protection available under the terms and conditions of the warranty and also allows us to contact you should it ever become necessary.

With your card on file, we can also help you in the event of loss or theft by verifying your ownership.

If you did not receive a *Product Registration Card*, please contact your dealer.

Attach Sales Receipt Here and File For Future Reference

To obtain warranty parts and service, you must show your sales receipt (or other evidence of purchase) to your Authorized RCA VCR Servicenter.

Taple or staple your sales receipt to this manual so you will have it handy should service ever be needed. Do not mail your sales receipt to us. File it at home with your owner's manual for future reference.

Record Vital Information Here.

No other RCA Video Cassette Recorder has the same serial number as yours. You will find the serial number and model number on the back of your VCR.

Make sure both numbers are recorded below so that you will have them in case your VCR is stolen or you need a complete description for identification.

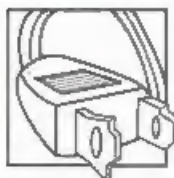
Model No. VR512A

Serial No. _____

Purchase Date: _____

Purchased From: _____

Safety Precautions







Your VCR operates on 120 volts, 60 Hz (normal household current) and has a polarized plug. Because one blade of the plug is wider than the other, the plug fits in the wall socket only one way. Do not defeat the safety feature of this plug. If you need an extension, use a polarized cord.

CAUTION: To prevent electric shock, match wide blade of plug to wide slot, fully insert.

MISE EN GARDE: Pour prévenir les chocs électriques, introduire la lame la plus large de la fiche dans la borne correspondante de la prise et pousser jusqu'au fond.

WARNING: To prevent fire or shock hazard, do not expose this VCR to rain or moisture.

Illustrated below is the label on the back of your Video Cassette Recorder.

	CAUTION RISK OF ELECTRIC SHOCK DO NOT OPEN		The symbol of a lightning flash within a triangle is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock.
	AVIS RISQUE DE CHOC ÉLECTRIQUE NE PAS OUVRIR		An exclamation point within a triangle is intended to alert the user to the presence of important operating and maintenance (service) instructions in the literature accompanying the product.

Caution: To reduce the risk of electric shock, do not remove the cover or back. No user-serviceable parts are inside. If you spill liquid on the VCR, disconnect the power cord to prevent possible fire or shock hazard and consult authorized service personnel. Moisture can damage internal parts. Refer all service to Authorized RCA VCR Servicenter personnel only.

Caution: Maintain electrical safety. Powerline-operated equipment or accessories connected to this unit should bear the UL listing mark or CSA certification mark on the accessory itself and should not have been modified so as to defeat the safety features. This will help avoid any potential hazard from electric shock or fire. If in doubt, contact qualified service personnel.

Note to Cable TV Installer:

This reminder is provided to call your attention to Article 820-40 of the National Electrical Code (Section 54 of Canadian Electrical Code, Part I), that provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building as close to the point of cable entry as practical.

FCC Warning: Any unauthorized changes or modifications to this equipment would void the user's authority to operate.

Caution: The unauthorized recording of television programs and other materials may infringe the rights of others.

IMPORTANT SAFEGUARDS (continued)

In addition to the careful attention devoted to quality standards in the manufacture of your video product, safety is a major factor in the design of every instrument. However, safety is your responsibility too.

These pages list important information that will help to assure your enjoyment and proper use of a Video Cassette Recorder and accessory equipment. Please read them carefully before operating your video product.

Installation

1. Read and Follow

Instructions—All the safety and operating instructions should be read before the video product is operated. Follow all operating instructions.



2. Retain Instructions

The safety and operating instructions should be retained for future reference.

3. Heed Warnings

Comply with all warnings on the video product and in the operating instructions.

4. Polarization

This video product is equipped with a polarized alternating-current line plug (a plug having one blade wider than the other). This plug will fit into the power outlet only one way. This is a safety feature. If you are unable to insert the plug fully into the outlet, try reversing the plug. If the plug still fails to fit, contact your electrician to replace your obsolete outlet. To prevent electric shock, do not use this polarized plug with an extension cord, receptacle, or other outlet unless the blades can be fully inserted without blade exposure. If you need an extension cord, use one with a polarized plug.

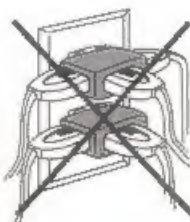
5. Power Sources

This video product should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of power supply to your home, consult your video dealer or local power company. For video products intended to operate from battery power, or other sources, refer to the operating instructions.

6. Overloading

Do not overload wall outlets or extension cords as this can result in a risk of fire or electric shock. Overloaded AC outlets, extension cords, frayed power cords, damaged or cracked wire insulation, and broken plugs are dangerous.

They may result in a shock or fire hazard. Periodically examine the cord, and if its appearance indicates damage or deteriorated insulation, have it replaced by your service technician.



7. Power-Cord Protection

Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the video product.

8. Ventilation

Slots and openings in the cabinet are provided for ventilation to ensure reliable operation of the video product and to protect it from overheating. These openings must not be blocked or covered. The openings should never be blocked by placing the video product on a bed, sofa, rug, or other similar surface. This video product should never be placed near or over a radiator or heat register. This video product should not be placed in a built-in installation such as a bookcase or rack unless proper ventilation is provided or the video product manufacturer's instructions have been followed.



9. Attachments

Do not use attachments unless recommended by the video product manufacturer as they may cause hazards.

Caution: Maintain electrical safety. Powerline operated equipment or accessories connected to this unit should bear the UL listing mark or CSA certification mark on the accessory itself and should not be modified so as to defeat the safety features. This will help avoid any potential hazard from electrical shock or fire. If in doubt, contact qualified service personnel.

10. Water and Moisture

Do not use this video product near water—for example, near a bath tub, wash bowl, kitchen sink or laundry tub, in a wet basement, or near a swimming pool and the like.

11. Accessories

Do not place this video product on an unstable cart, stand, tripod, bracket, or table. The video product may fall, causing serious injury to a child or adult as well as serious damage to the video product. Use this video product only with a cart, stand, tripod, bracket, or table recommended by the manufacturer or sold with the video product. Any mounting of the product should follow the manufacturer's instructions and use a mounting accessory recommended by the manufacturer.

11A

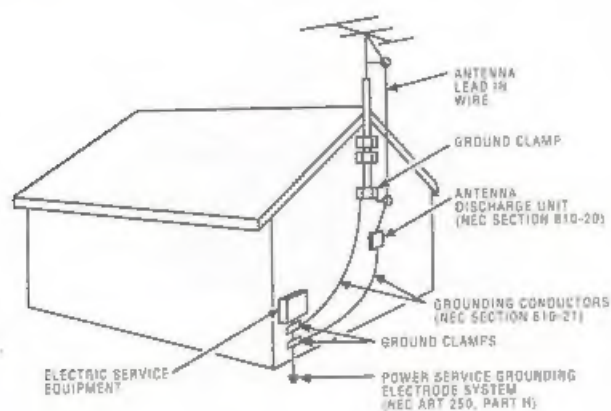
A video product and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the video product and cart combination to overturn.



IMPORTANT SAFEGUARDS (continued)

- 12. Outdoor Antenna Grounding**—If an outside antenna or cable system is connected to the video product, be sure the antenna or cable system is grounded so as to provide some protection against voltage surges and built-up static charges. Section 810 of the National Electrical Code, ANSI/NFPA No. 70-1984 (Section 54 of Canadian Electrical Code, Part 1) provides information with respect to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna-discharge unit, size of grounding conductors, location of antenna-discharge unit, connection to grounding electrodes, and requirements for the grounding electrode. See example below.

Example of Antenna Grounding



- 16. Lightning**—For added protection for this video product during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet and disconnect the antenna or cable system. This will prevent damage to the video product due to lightning and power line surges.



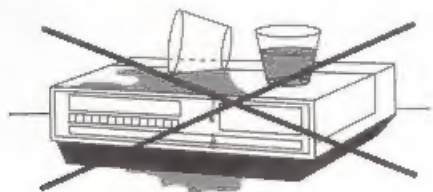
Service

- 17. Servicing**—Do not attempt to service this video product yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.
- 18. Conditions Requiring Service**—Unplug this video product from the wall outlet and refer servicing to qualified service personnel under the following conditions.
- A. When the power-supply cord or plug is damaged.
 - B. If liquid has been spilled, or objects have fallen into the video product.
 - C. If the video product has been exposed to rain or water.
 - D. If the video product does not operate normally by following the operating instructions. Adjust only those controls that are covered by the operating instructions. Improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the video product to its normal operation.
 - E. If the video product has been dropped or the cabinet has been damaged.
 - F. When the video product exhibits a distinct change in performance—this indicates a need for service.
- 19. Replacement Parts**—When replacement parts are required, have the service technician verify that the replacements he uses have the same safety characteristics as the original parts. Use of replacements specified by the video product manufacturer can prevent fire, electric shock, or other hazards.
- 20. Safety Check**—Upon completion of any service or repairs to this video product, ask the service technician to perform safety checks recommended by the manufacturer to determine that the video product is in safe operating condition.

- 13. Power Lines**—An outside antenna system should not be located in the vicinity of overhead power lines, other electric light or power circuits, or where it can fall into such power lines or circuits. When installing an outside antenna system, extreme care should be taken to keep from touching or approaching such power lines or circuits as contact with them might be fatal. Installing an outdoor antenna can be hazardous and should be left to a professional antenna installer.

Use

- 14. Cleaning**—Unplug this video product from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.
- 15. Object and Liquid Entry**—Never push objects of any kind into this video product through openings as they may touch dangerous voltage points or "short-out" parts that could result in a fire or electric shock. Never spill liquid of any kind on the video product.



Using This Manual

Congratulations on your choice of an RCA VCR. You have selected a high-quality, precision-engineered instrument designed to give you years of video and audio enjoyment.

To get the best performance from your new VCR, it is important that you carefully read and follow the operating instructions in this manual in the sequence in which they are presented.

Should you experience a problem, please follow the "Trouble Checks" on pages 44-45. The warranty describes what will be done for you should your new VCR need service during the warranty period. It also tells you how and from whom you should request

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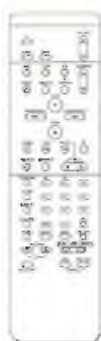
First-Time Operation

Even if you have never used a VCR before, you can get your VCR connected and working quickly by following the simplified steps below. The page numbers on which you can find detailed instructions are also listed for your convenience.

1. Unpack the VCR and accessories.

Make sure you remove all the accessories and information sheets that came packed with your VCR.

- Save the packing materials and box in case you ever need to ship or store your VCR.
- The items shown below came packed with your VCR. If any are missing or appear damaged, contact your RCA dealer immediately.



Remote Control
(Stock No. 210843)



Remote Control Batteries
(Size "AAA" 1.5 Volts)



VCR Coaxial RF Cable

Caution: Avoid operating your VCR right after you have moved it from a cold location directly to a warm location. Moisture may have condensed on the head drum inside the VCR that may cause the tape to stick and damage the head wheel or tape. Let the VCR warm up for about 1-1/2 to 2 hours before inserting a video cassette.

2. Install the batteries in the remote control.

Turn the remote control over, and remove the cover of the battery compartment. Insert the batteries in the battery compartment so that their positive (+) ends contact the positive terminals. Replace the cover.

Notes: Never place anything heavy on top of the remote control or lay it upside-down. This may accidentally depress the buttons for a long time and discharge the batteries.

Replace the batteries when the VCR fails to respond to the remote control.

Remove the batteries from the remote control if it will not be used for a month or more. This will help prevent possible damage from battery leakage. If leakage occurs, wipe up the liquid inside the compartment and replace the batteries with new ones.

Do not mix new and used batteries or different brands of batteries.

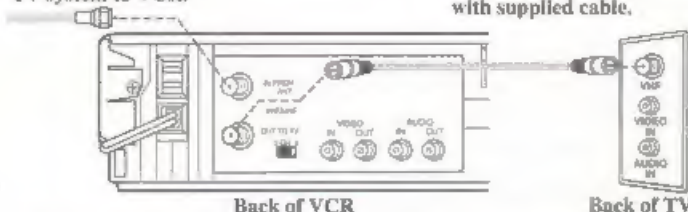
3. Connect an antenna or cable-TV system to VCR.

Your VCR is quite easy to install. To connect an antenna or cable-TV system, you will first attach the antenna to the VCR, and then connect the VCR to the TV as shown below.

Detailed instructions for connecting more complicated types of systems are on pages 36-41.

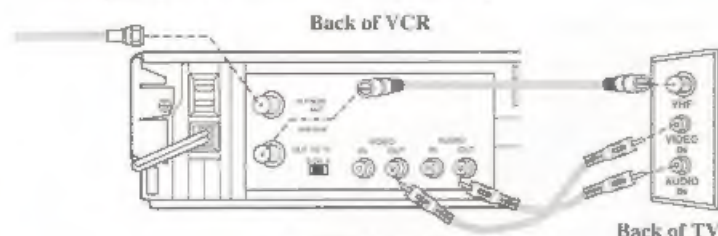
First connect
antenna or cable-
TV system to VCR.

Then connect VCR
to VHF jack on TV
with supplied cable.



Remember: When you connect the *OUT TO TV* jack on the VCR to the TV as shown above, you will be tuning your TV to channel 3 or 4 to see the signals from the VCR.

Optional for TV Monitors: If your TV is a monitor that has *AUDIO* and *VIDEO IN* jacks, you can use optional audio/video cables to connect your VCR to the TV as shown below. This connection may produce a slightly better picture during playback. *Details are on page 42.*



You can also connect VCR
to TV monitor with
optional audio/video cables.

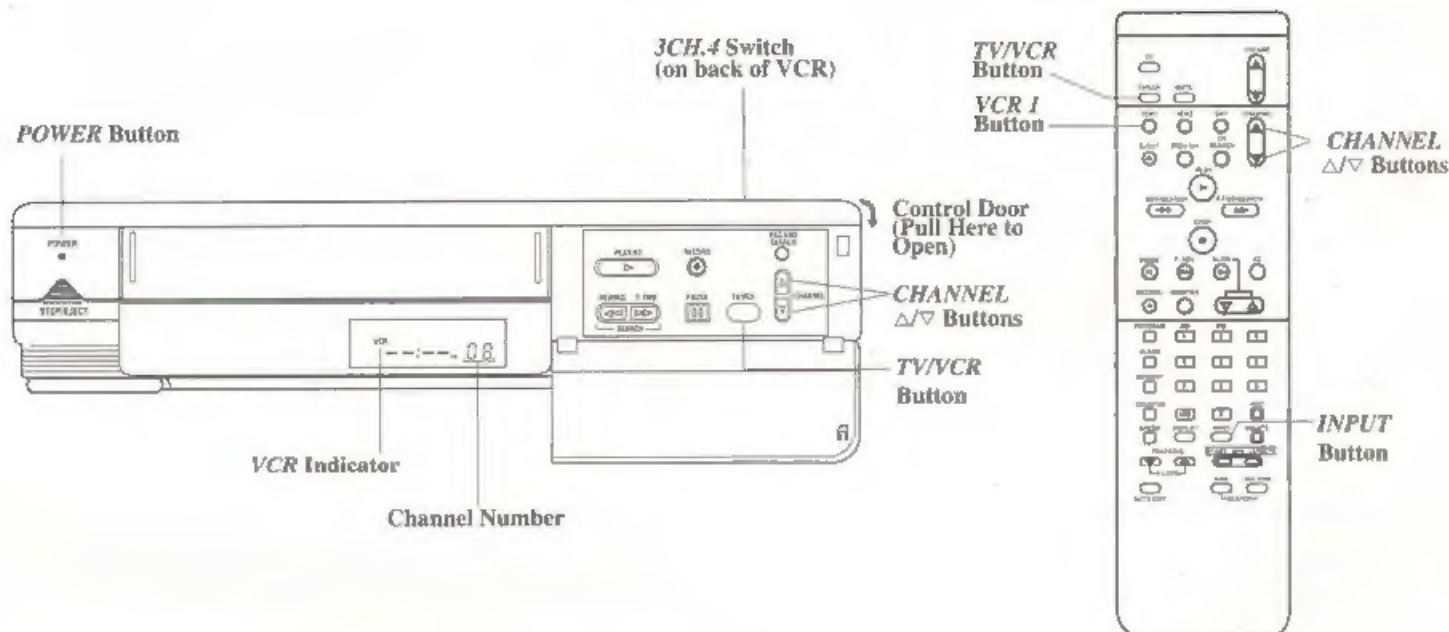
Remember: When you connect the *AUDIO* and *VIDEO OUT* jacks on the VCR to a TV monitor as shown above, you will be tuning your monitor to its video input channel (varies with TV models) to see the signal coming from the VCR. You will also be able to see the VCR's signal on channel 3 or 4 if the *OUT TO TV* jack is connected.

4. Set the 3CH.4 switch on the back of the VCR to select the "VCR Channel".

First set the 3CH.4 switch on the back of the VCR to either channel 3 or 4, and then tune your TV to the same channel. This is called the "VCR Channel".

Remember that your TV must always be turned on and tuned to this channel (3 or 4) for you to see what the VCR is doing (unless you have a TV monitor). If you have connected your VCR to a TV monitor with audio/video cables as shown above, set your TV to its video input channel (such as 91, etc.) to see what the VCR is doing.

First-Time Operation (continued)



5. Turn on the VCR and select an active channel.

- Plug in the VCR's power cord and press the **POWER** button on the VCR (or the **VCR 1** button on the remote control) to turn it on.

Note: Your VCR can be set to respond to the **VCR 1** or **VCR 2** button on the remote control. If your VCR does not turn on when you press the **VCR 1** button, try pressing the **VCR 2** button. See page 15 for details.

- Press the **CHANNEL** up or down button to select an active channel in your area. The channel number will appear in the VCR's display panel.

Note: If the line indicator ("L") appears in the VCR's display panel, press the **INPUT** button on the remote control to turn it off.

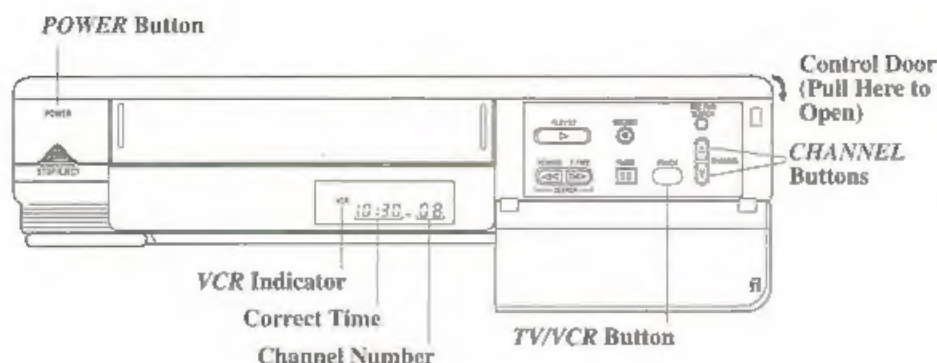
6. Learn how to use the TV/VCR button.

Press the **TV/VCR** button to turn on or off the **VCR** indicator in the display panel. The **VCR** indicator turns on automatically each time you turn on the VCR, insert a cassette tape, or press the **PLAY/X2** button on the VCR (or **PLAY** button on the remote control).

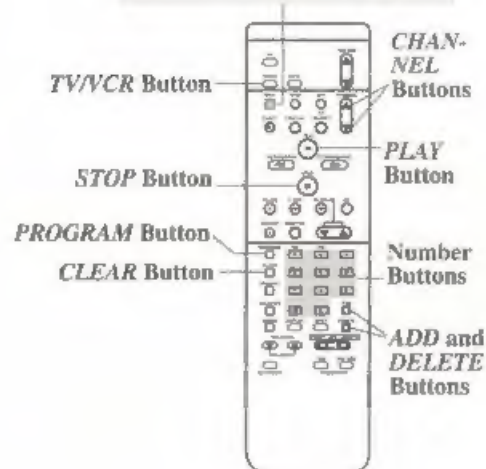
- When the **VCR** indicator is on, your TV must be tuned to the "VCR Channel" (3 or 4) so you can see what the VCR is doing (unless you have a TV monitor as explained below). The TV then receives the picture from the VCR, and you can select channels with the **CHANNEL** up or down button.
- When the VCR is turned off (or the **VCR** indicator is off), your TV receives the picture from your home antenna or cable-TV system as it did before you connected the VCR. You can then use the **CHANNEL** buttons on your TV to select channels.
- The **TV/VCR** button lets you record one channel with the VCR while you watch another channel on the TV. Details are on page 22.

Note for TV Monitor: Whenever the VCR is turned on, you will be able to see what it is doing on the video input channel if you have connected a TV monitor using the **AUDIO** and **VIDEO** jacks. The signal from the VCR on the video input channel will not be affected by turning off the **VCR** indicator when you are recording one channel on the VCR and want to watch a different channel on the TV.

First-Time Operation (continued)



Press **VCR 1** (or **VCR 2**) button to put the remote in "VCR mode". Details are on page 10.



7. Test the VCR connections.

1. Turn on the VCR and select an active channel using the **CHANNEL** up or down button.
2. Turn on the TV and tune it to the "VCR channel" (3, 4, or video input).
3. If your "VCR channel" is 3 or 4, make sure the **VCR** indicator is on in the VCR's display panel. Press the **TV/VCR** button to turn it on.

Note: If you have connected your VCR to a TV monitor using the **AUDIO** and **VIDEO** jacks, tune your TV to the video input channel. The **VCR** indicator does not have to be on for this connection.

Test 1: Make sure the TV's picture and sound are from the channel you have selected on the VCR and of the same quality they were before you connected the VCR. Change channels with the VCR's **CHANNEL** buttons. If the picture on the TV does not change to the channel you select with the VCR, go back and carefully check the connections and previous steps.

Test 2: Turn off the VCR, and change channels on the TV with the TV's **CHANNEL** buttons. Make sure the picture and sound you see on the TV are from the channel you selected on the TV and of the same quality they were before you connected the VCR. If the TV does not operate as it did before you connected the VCR, go back and carefully check the connections.

8. AutoProgram channels into channel memory.

The channel memory is the list of channels your VCR will stop on when you press its **CHANNEL** up or down button.

The quickest way to program the VCR's channel memory with channels available in your area is to use the **AUTOPROGRAM** menu. The VCR will automatically cycle through all channels and place all active channels into its

channel memory for you. Then you can add or delete individual channels as desired.

Here is how to start the AutoProgramming feature:

1. Make sure the VCR and TV are turned on and the TV is tuned to its "VCR channel" (3, 4, or video input). If you are watching the VCR on channel 3 or 4 of your TV, make sure the **VCR** indicator is on in the VCR's display panel.
2. Press the **PROGRAM** button on the remote control and then press number button "4" to display the following menus.

First press **PROGRAM**.

Then press "4".

Press "1" to change this display.

TO SELECT MODE
PUSH NUMBER SHOWN

- 1 TIMER PROGRAM
- 2 PROGRAM REVIEW
- 3 CLOCK SET
- 4 VCR SETUP
- 5 VCR RESET

PUSH TO CHANGE

- 1 NORMAL/CATV (NORMAL)
- 2 AUTOPROGRAM

-DISPLAY- FOR MORE
TO END PUSH PROGRAM

3. Before you start AutoProgramming, you must tell your VCR whether you have an antenna or a cable-TV system connected to it. You may do this by pressing number button "1" to change the setting of the **NORMAL/CATV** display.

- If you connected a home-antenna system to your VCR, set this display to **NORMAL**.
- If you connected a cable-TV system to your VCR, set this display to **CATV**.

(continued on next page)

First-Time Operation (continued)

8. AutoProgram channels. (continued)

4. After you have selected *NORMAL* or *CATV*, press number button "2" while the menu appears on the TV to start the VCR AutoProgramming itself.

Notes: The VCR will automatically cycle through all the channel numbers and place only the active channels into its channel memory. This takes about one minute. The channel numbers will stop changing in the VCR's display panel when AutoProgramming is completed.

AutoProgramming is usually a one-time procedure. If you move to a new location that has different channels or if power is interrupted, the channel memory will have to be reprogrammed.

5. After the VCR has finished AutoProgramming, you can press the *CHANNEL* up or down button to see what channels are in channel memory.

Notes: You can also check the channels in channel memory by pressing the *CH* (channel) *SEARCH* button on the remote control. Press the *CH SEARCH* button again to stop channel search.

Occasionally an active channel may be missed if the signal is weak or the channel happens to be "off the air" when the VCR is autoprogrammed.

An inactive channel may be included in channel memory if there is some "noise" or stray signal on the channel during programming.

Add or delete channels from channel memory.

The *ADD* and *DELETE* buttons are slightly recessed into the remote control. This helps prevent them from being pressed accidentally. Use your fingernail, a toothpick, or a straightened paper clip to press the buttons.

To Add a Channel to Channel Memory:

To add a channel (up to 99) to the channel memory scan list, press two number buttons on the remote control. Remember to always press "0" before a single-digit channel number. (For example, press "0", then "8", for channel 8.) Then press the *ADD* button on the remote control.

To add a cable-TV channel over 99, press the "100" button and then two number buttons. Then press the *ADD* button on the remote control.

To Delete a Channel from Channel Memory:

Press the *CHANNEL* up or down button (or number buttons) to select the channel you want to delete from channel memory. Then press the *DELETE* button on the remote control.

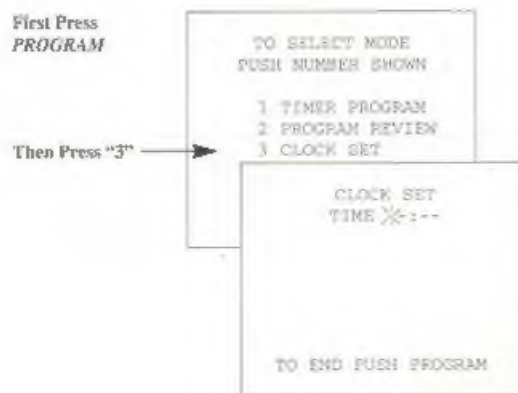
Notes: An *ADD* or *DEL* (delete) display will appear briefly on the TV screen when you add or delete a channel from channel memory.

You can still select a channel that is not in channel memory by pressing two number buttons on the remote control.

9. Set the clock and date.

The clock display area in the VCR's display panel will look like "--:--" until you set the clock. The clock must be set to the correct time and date before you can program the VCR for express (XPR) or timer recording. Once the correct time and date are set, the VCR will automatically maintain them unless power is interrupted.

To set the clock and date, press the *PROGRAM* button on the remote control, then press number button "3". The following menus will appear on the TV screen.



When the *CLOCK SET* menu appears, use the number buttons on the remote control to enter the correct time (including *AM* and *PM*) and date as indicated by the flashing portion of the menu on the TV screen.

Notes: Always press "0" before single-digit hours, minutes, months, or days. For example, to enter a time of 5:07, press "0", then "5", then "0", then "7". To enter August 2, 1991, press "0", then "8", then "0", then "2", then "9", then "1".

Press the number button "1" for *AM*, "2" for *PM*.

When you are finished, press the *PROGRAM* button to start the clock.

To Correct the Time or Date:

If an incorrect number appears in the time or date display, press the *CLEAR* button repeatedly until the incorrect number flashes. Then enter the correct number and continue from there.

First-Time Operation (continued)

10. Make a recording and play it back.

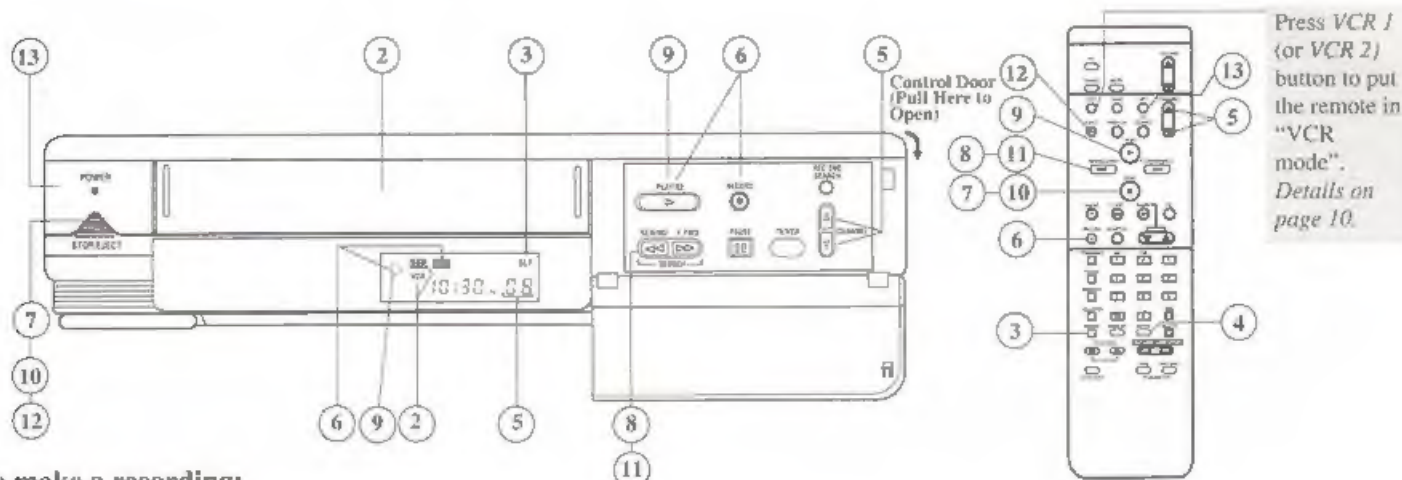
Follow the steps below to practice making a short recording and then play it back.

Details on recording speeds, features, and recording guides are on pages 21-31.

Details on playback features and playback guides are on pages 17-20.

Several buttons on the remote control perform the same function as buttons with the same name on the VCR. You may use whichever button is more convenient at the time.

Details on the operating controls of the VCR and remote control are on pages 7-15.



To make a recording:

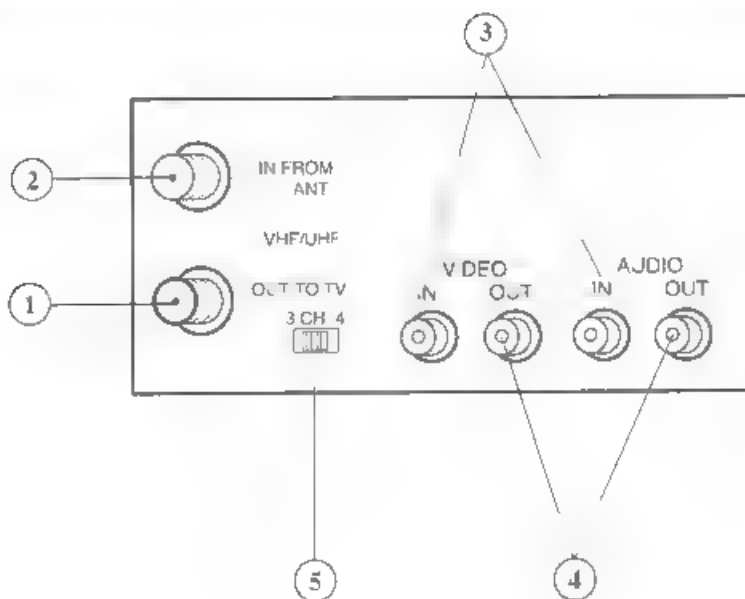
- ① Turn on the TV and tune it to your "VCR channel" (3*, 4*, or video input).
* The TV must be tuned to the same channel you selected with the **JCH.4** switch on the back of the VCR.
- ② Insert a cassette with the record-protect (safety) tab intact. The cassette-in (C) and VCR indicators will light in the VCR's display panel. *Details about inserting and removing cassettes are on page 16.*
Notes: The VCR is automatically turned on when you insert a cassette.
If you insert a cassette with its record-protect tab removed, the VCR will automatically begin playback.
If you try to record on a cassette with a record-protect tab removed, the VCR will eject it. *Details about the record-protect tab are on page 16.*
Make sure the VCR indicator appears in the VCR's display panel. If not, press the **TV/VCR** button to turn it on.
- ③ Select a tape recording speed by pressing the tape **SPEED** button on the remote control. The tape speed indicator (**SP**, **LP**, or **SLP**) appears in the VCR's display panel and on the TV screen. Use **SLP** for normal recording. Tape recording speeds are compared on page 21.
Note: The VCR automatically selects the correct tape speed for playback.
- ④ Make sure the line indicator (**L**) does not appear in the VCR's display panel. If it appears, press the **INPUT** button on the remote control to turn it off.
- ⑤ Select the channel to be recorded by pressing the **CHANNEL** up or down button. The channel number appears in the VCR's display panel and on the TV screen.

- ⑥ Start recording by pressing the **RECORD** and **PLAY/X2** button at the same time on the VCR (or the **RECORD** button on the remote control). The record indicators (**REC** and **▶**) will light in the VCR's display panel.
- ⑦ When you are finished recording, press the **STOP/EJECT** button on the VCR (or the **STOP** button on the remote control).

To play the recording back:

- ⑧ Rewind the tape by pressing the **REWIND** button on the VCR (or the **REW/SEARCH** button on the remote control). If you do not want to play back the tape, skip to step ⑫.
- ⑨ Press the **PLAY/X2** button on the VCR (or the **PLAY** button on the remote control) to begin playback. The play indicator (**▶**) will light in the VCR's display panel.
- ⑩ When you are finished playing back the tape, press the **STOP/EJECT** button on the VCR (or the **STOP** button on the remote control).
- ⑪ Rewind the tape by pressing the **REWIND** button on the VCR (or the **REW/SEARCH** button on the remote control).
- ⑫ To eject the cassette, press the **STOP/EJECT** button on the VCR (or the **EJECT** button on the remote control).
- ⑬ Turn off the VCR by pressing the **POWER** button on the VCR (or the **OFF** button on the remote control).
- ⑭ Turn off the TV.

VCR's Back Panel



① **OUT TO TV Connector**

Connect the supplied VCR coaxial RF cable to this connector. Then connect the cable to your TV.

- See pages 35-37 for home antenna connections.
- See pages 35 and 38-41 for cable-TV connections.

② **IN FROM ANT. (Antenna) Connector**

Attach a home antenna or cable-TV system to this connector.

- See pages 35-37 for home antenna connections.
- See pages 35 and 38-41 for cable-TV connections.

③ **VIDEO IN and AUDIO IN Jacks**

These jacks are used to receive signals from another device (such as a camcorder or another VCR).

To see the signal from these jacks, press the **INPUT** button on the remote control to light the line indicator (L) in the VCR's display panel.

- See page 29 for "Recording From a Camcorder".
- See page 30 for "Recording From Another VCR".

④ **VIDEO OUT and AUDIO OUT Jacks**

These jacks are used to send signals from the VCR to another device.

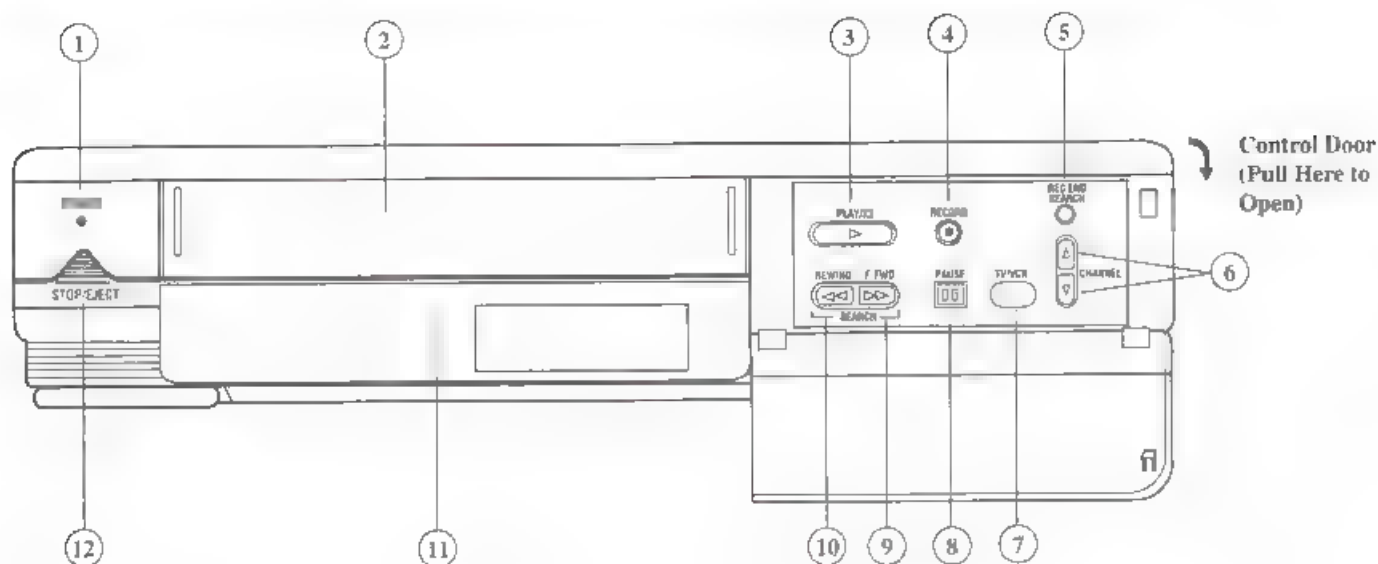
- See page 42 for connecting a TV monitor.
- See page 30 for copying tapes using two VCR's.

⑤ **3CH.4 Switch**

The channel you select with this switch (3 or 4) is the same channel your TV must be tuned in order to see what the VCR is doing.

- See page 2 for details.

VCR's Operating Controls



① **POWER Button**

- Press the **POWER** button to turn the VCR on or off
- The VCR will stop and turn off if you press the **POWER** button during normal record, playback, or fast-forward operation
- If you press the **POWER** button during rewind, the VCR will continue rewinding the tape and then turn off
- If you want to stop an express (XPR) or normal timer recording, press the **POWER** button and then the **STOP/EJECT** button within ten seconds

② **Cassette Door** (See page 16.)

③ **PLAY/X2 Button**

- Press to begin playback. (See pages 17-20.)
- Press during playback to view the picture at twice the normal playback speed. (See page 18.)

④ **RECORD Button**

Press the **RECORD** button and the **PLAY/X2** button **at the same time** to begin recording. (See pages 21-31.)

⑤ **REC (Record) END SEARCH Button** (See page 23.)

⑥ **CHANNEL Δ/∇ Buttons**

After channels have been autoprogrammed into the channel memory scan list, press these buttons to select the next higher or lower channel

- Press **CHANNEL Δ** to select a higher channel
- Press **CHANNEL ∇** to select a lower channel

⑦ **TV/VCR Button**

Press the **TV/VCR** button to turn the **VCR** indicator on or off in the VCR's display panel. (See page 3.)

⑧ **PAUSE Button**

- Playback pause (See page 18.)
- Recording pause (See page 23.)

⑨ **F.FWD (Fast-Forward)/SEARCH Button**

- Press to fast forward the tape when the VCR is stopped.
- Press to visually search forward on the tape during playback. (See page 18.)

⑩ **REWIND/SEARCH Button**

- Press to rewind the tape when the VCR is stopped.
- Press to visually search the tape in reverse during playback. (See page 18.)

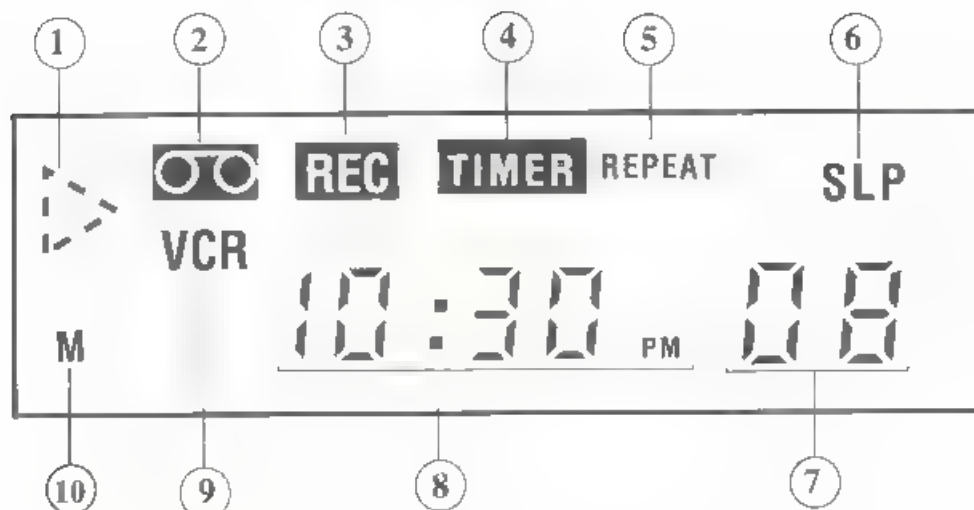
⑪ **Infrared Remote Sensor**

This sensor receives signals from the remote control. Aim the remote at this sensor. There cannot be any obstructions between them

⑫ **STOP/EJECT Button**

- Press this button to stop the normal functions of record, playback, rewind, fast-forward, record-pause, or stop-action pause
- Press this button when the VCR is stopped to eject the cassette (See page 16.)

VCR's Display Panel



① Status Indicators

This area of the display shows what the VCR is doing: The **REC** and **▶** indicators for record, **▶** for playback, flashing **◀** for rewind and reverse search, flashing **▶** for fast forward and forward search, **||** for play-pause, **REC ||** for record-pause, **|▶** for frame advance and slow motion, and flashing **||** when a cassette is ejected. This area is blank when the VCR is in the stop mode.

② Cassette-in Indicator

The cassette-in indicator lights when a cassette is properly inserted into the VCR. (See page 16.)

③ Record Indicator **REC**

The record indicator appears with the play indicator (**▶**) when the VCR is recording, and with the pause indicator (**||**) when the VCR is in the record-pause mode.

④ **TIMER** Indicator (See pages 24-28.)

⑤ **REPEAT** Indicator (See page 15.)

⑥ Tape Speed Indicators (**SP**, **LP**, and **SLP**) (See page 21.)

⑦ Channel Number or Line Indicator (**L**)

The channel number selected or the line indicator appears in this area of the display. Press the **INPUT** button on the remote control to turn the line indicator on or off.

- Turn the line indicator (**L**) off for normal recording from the VCR's built-in tuner.
- Turn the line indicator (**L**) on to record from a device (such as a camcorder or another VCR) that is connected to the **AUDIO** and **VIDEO IN** jacks on the back of the VCR.

⑧ Current Time and Elapsed-Time Counter

Press the **COUNTER** button on the remote control to switch between the current time and the elapsed-time counter in the VCR's display panel.

⑨ **VCR** Indicator (See page 3.)

⑩ Memory-Stop Indicator

This indicator appears when the Memory-Stop feature is activated. Details are on page 19.

Remote Control Buttons

When using the remote control, always aim it directly at the front of the component you are trying to control. This remote can control the VR512A, a compatible VCR, and a compatible TV. See page 31 for compatibility charts.

To operate the remote control, first press one of the component buttons (TV, VCR 1, or VCR 2) to tell the remote control which component you want to control

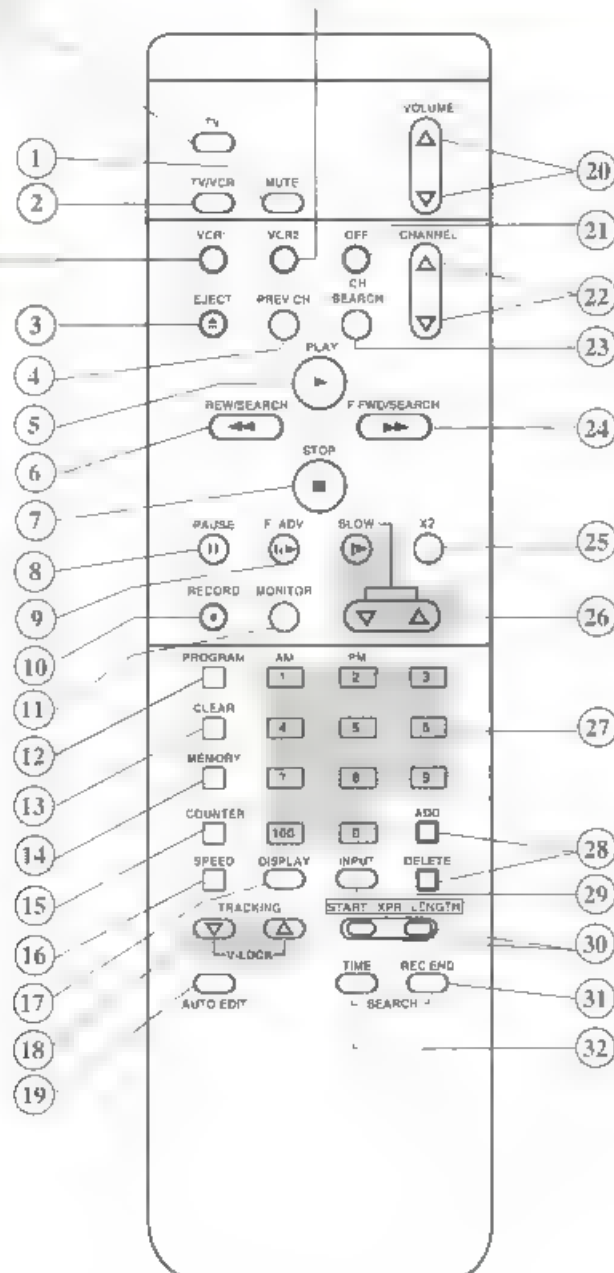
The other buttons on the remote control will then only control that component. To control a different component, first press the corresponding button.

You can program your VCR to respond to either the VCR 1 or VCR 2 button by changing the setting of the REMOTE VCR1/VCR2 menu function described on page 15

TV Button: Press this button to put the remote control in the "TV mode" The remote must be in the "TV mode" before the other buttons will control a compatible RCA TV

VCR 1 Button: If the REMOTE VCR1/VCR2 menu function is set to the VCR1 position (as described on page 15), pressing this button will turn on your VCR and put the remote in the "VCR1 mode" The remote must be in the "VCR1 mode" before the other buttons will control the VCR.

VCR 2 Button: If the REMOTE VCR1/VCR2 menu function is set to the VCR2 position (as described on page 15), pressing this button will turn on your VCR and put the remote in the "VCR2 mode" The remote must be in the "VCR2 mode" before the other buttons will control the VCR



Remote Control Buttons (continued)

① (TV) MUTE Button

- Press the **MUTE** button to quickly reduce a compatible TV's sound to a minimum level without affecting the picture.
- To restore the sound, press the **MUTE** button again or press the **VOLUME** up button.

② TV/VCR Button (See page 3)

③ EJECT Button

Press this button when the VCR is stopped or playing back a tape to eject the tape. The **EJECT** button has no effect during recording.

④ PREV CH (Previous Channel) Button

Press this button to switch between the channel you are watching and the last channel the VCR was tuned to. This is useful if you want to monitor two channels.

- To operate, select the first channel you want to watch. Then select the other channel by pressing the number buttons. The VCR will now switch between the two channels each time you press the **PREV CH** button.
- Press the **TV** button and then use the **PREV CH** button to switch between the channel you are watching and the last channel the TV was tuned to.

⑤ PLAY Button

- Press to start playback.
- Press during forward search, reverse search, X2 (double speed), or slow-motion playback to return to normal playback. (See pages 17-20.)

⑥ REW (Rewind)/SEARCH Button

- Press to rewind the tape when the VCR is stopped.
- Press to visually search the picture in reverse during playback. (See page 18 for details.)

⑦ STOP Button

Press this button to stop the normal functions of record, playback, rewind, fast-forward, record-pause, or stop-action pause.

⑧ PAUSE Button

- Playback pause (See page 18.)
- Recording pause (See page 23.)

⑨ FADV (Frame Advance) Button (See page 18.)

⑩ RECORD Button

Press the **RECORD** button to start recording. (See pages 21-31.)

⑪ MONITOR Button (See page 20.)

⑫ PROGRAM Button

- Press the **PROGRAM** button to display the VCR's program menu on the TV screen for setting the clock, AutoProgramming the channel memory scan list, programming the timer, and controlling some of the VCR's special features.
- Press the **TV** button and then the **PROGRAM** button to control the same function as the **PROGRAM** or **ENTER** button on some compatible TV's.

⑬ CLEAR Button (See pages 5, 19, and 27.)

⑭ MEMORY Button (See page 19.)

⑮ COUNTER Button (See page 19.)

⑯ Tape SPEED Button (See page 21.)

⑰ DISPLAY Button (See page 19.)

⑱ TRACKING/V-LOCK Buttons (See page 18.)

⑲ AUTO EDIT Button (See page 31.)

⑳ (TV) VOLUME Up and Down Buttons

- Press the **VOLUME** up button to increase a compatible TV's volume.
- Press the **VOLUME** down button to decrease a compatible TV's volume.

㉑ OFF Button

- Press the **OFF** button to turn off the VCR when the remote control is in the "VCR mode". The VCR will stop and turn off if you press the **OFF** button during record, playback, or fast-forward operation. If you press the **OFF** button during rewind, the VCR will continue to rewind the tape and then turn off.
- Press the **OFF** button to turn off a compatible TV when the remote control is in the "TV mode".

㉒ CHANNEL Up and Down Buttons

- Press the **CHANNEL** up button to select the next higher channel or press the **CHANNEL** down button to select the next lower channel in the VCR's channel memory scan list. (See pages 4-5.)
- Press the **TV** button and then the **CHANNEL** up or down button to select the next higher or lower channel in the TV's channel memory scan list.

㉓ CH (Channel) SEARCH Button (See page 13.)

㉔ F.FWD (Fast Forward)/SEARCH Button

- Press to fast-forward the tape when the VCR is stopped.
- Press to visually search forward during playback. (See page 18 for details.)

㉕ X2 (Double Speed) Button (See page 18.)

㉖ SLOW and SLOW Up and Down Buttons (See page 18.)

㉗ Number Buttons ("0" through "9" and "100")

- To select any channel up 99, press two number buttons. To select any cable channel over 99, press the **100** button and then two number buttons. The number buttons are also used with the VCR's special features.
- Press the **TV** button and then two number buttons to select any channel up 99 on a compatible TV. Press the **TV** button, then press the **100** button and two number buttons to select any cable channel over 99 on a compatible TV.

㉘ ADD and DELETE Buttons (See page 5.)

㉙ INPUT Button

- Press to turn off the line indicator ("L") in the VCR's display panel for normal recording.
- Press to turn on the line indicator ("L") in the VCR's display panel to record from the **AUDIO** and **VIDEO IN** jacks on the back of the VCR.

㉚ XPR (START and LENGTH) Buttons (See pages 24-25.)

㉛ REC (Record) END SEARCH Button (See page 23.)

㉜ TIME SEARCH Button (See page 20.)

Alternate Remote Controls

Selected models of RCA TV's have remote controls that will also control this VCR. If your RCA TV's remote control has a *VCR*, *VCR 1*, or *VCR 2* button, it will control this VCR.

Press the *VCR*, *VCR 1*, or *VCR 2* button on the TV's remote control to put the remote control in the "VCR mode". The remote must be in the "VCR mode" before

it will control the VCR. Press the *TV* button to put the remote control back in the "TV mode".

The chart below shows the corresponding buttons on the TV's remote control that may perform the same functions as the buttons on the VCR (or the VCR's remote control).

Name of Button on the VCR or VCR's Remote Control	Corresponding Buttons on TV's Remote Control That Operate VCR. (Remember to press the <i>VCR</i> , <i>VCR 1</i> , or <i>VCR 2</i> button to put remote control in "VCR mode".)
<i>POWER</i> , <i>VCR 1</i> , or <i>VCR 2</i> (To Turn on VCR)	<i>VCR</i> , <i>VCR 1</i> , or <i>VCR 2</i>
<i>POWER</i> or <i>OFF</i> (To Turn off VCR)	<i>OFF</i> or <i>ON/OFF</i>
<i>STOP/EJECT</i> or <i>STOP</i>	<i>PC/STOP</i> or <i>STOP</i>
<i>TV/VCR</i>	<i>ANT</i> or <i>TV/VCR</i>
<i>RECORD</i>	<i>REC</i> or <i>RECORD</i>
<i>PLAY/X2</i> or <i>PLAY</i>	<i>PLAY</i> or <i>PLAY</i> ►
<i>REWIND/SEARCH</i> or <i>REW/SEARCH</i>	<i>REW</i> , <i>REWIND</i> , or <i>FAST</i> ◀◀
<i>FFWD/SEARCH</i>	<i>FF</i> , <i>FFWD</i> , <i>FFWD</i> , or <i>FAST</i> ▶▶
<i>PAUSE</i>	<i>MUTE/PAUSE</i> or <i>PAUSE</i>
<i>CHANNEL</i> ▲/▼	<i>CHAN</i> ▲/▼ or <i>CHANNEL</i> ▲/▼
<i>CLEAR</i>	<i>CLR</i> or <i>CLEAR</i>
Number Buttons 0 through 9 and 100	Number Buttons (0 through 9 and 100)
<i>TRACKING/V LOCK</i>	<i>SLOW TRACK</i> +, <i>VOL/TRACK</i> ▲ ▼ or <i>TRK</i> +
<i>FADV</i>	<i>FR ADV</i> , <i>FADV</i> , or <i>CS</i>
<i>DISPLAY</i>	<i>DSPY</i> , <i>DISPLAY</i> , or <i>STATUS</i>
<i>SLOW</i> and <i>SLOW</i> ▲/▼	<i>SLOW</i> ▲/▼ or <i>SLOW</i> ◀/▶
<i>PROGRAM</i>	<i>PROGRAM</i> or <i>PROG</i>
<i>SPEED</i>	<i>SPEED</i>
<i>COUNTER</i>	<i>TIME</i>
<i>MEMORY</i>	<i>RES/MEM</i> , <i>MEMO</i> , or <i>MEMORY</i>

VCR Features

Quick-Play Feature

The quick play feature eliminates the “delay” when you begin recording or playing back a tape. The VCR automatically positions the tape for “action” whenever a cassette is inserted or when the VCR is turned on with a cassette already inserted.

The VCR also keeps the tape “ready” when you place the VCR in the stop mode. After you have placed the VCR in the stop mode, you will hear the cylinder head inside the VCR continue to rotate for about ten minutes while the VCR is “waiting” for you to select the next function. After ten minutes the tape is partially unloaded to prevent damage. After the VCR is in the stop mode for approximately 30 minutes, the tape is fully unloaded. You may hear the VCR make some noise while the tape is unloading.

AI (Automatic Intelligence) Picture Control

The VCR has AI (Automatic Intelligence) picture control that automatically controls the video output signal from the VCR. This feature provides improved picture resolution or less noise depending on the condition of the tape.

High-Speed Rewind

The VCR has a high-speed rewind feature that eliminates the long wait while the tape is rewinding.

Automatic Head Cleaning

This VCR has an automatic head-cleaning system. Whenever a cassette is inserted or removed from the VCR, the automatic head-cleaning system will activate.

The automatic head-cleaning system minimizes the need for accessory cleaners or cleaning by a service center.

CH (Channel) SEARCH Feature

The VCR will automatically display every channel in its channel memory scan list for approximately 1-1/2 seconds when you press the *CH* (channel) *SEARCH* button.

- To start channel search, press the *CH SEARCH* button on the remote control.
- When you see the channel you want, press the *CH SEARCH* button again to stop channel search.

Note: Selecting a channel with the *CHANNEL* up or down button or with number buttons will also stop channel search.

VCR Menus

Press
PROGRAM

1 TIMER PROGRAM
2 PROGRAM REVIEW
3 CLOCK SET
4 VCR SETUP
5 VCR RESET

TO PUSH PROGRAM

PROGRAM Menu

Press "4"

✓ AUTOPROGRAM
DISPLAY FOR MORE

1st VCR SETUP Menu

Press
DISPLAY

2nd VCR SETUP Menu

PROGRAM Menu

Your VCR allows remote control adjustment of several additional features. Press the **PROGRAM** button on the remote control to display the program menu. **TIMER PROGRAM** and **PROGRAM REVIEW** are used for timer programming as described on pages 26-28. **CLOCK SET** is described on page 5. The **VCR SETUP** menus are described in the next columns.

VCR RESET Function

The **VCR RESET** function allows you to quickly reset the VCR features to their original factory settings.

To reset the VCR features, press the **PROGRAM** button and then "5" on the remote control. Resetting the VCR features will not affect the clock, timer programming, **NORMAL/CATV** setting, or channel memory scan list.

Press **PROGRAM**

Press "5"
to Reset

Features Reset on
2nd VCR SETUP Menu

Features Reset
to Original
Factory Settings

OFF
ON

VCR

PUSH PROGRAM

Notes: The **REMOTE** setting is reset to **VCR1**. If you have been using the **VCR 2** button on the remote control to control the VCR, you must now press the **VCR 1** button to control the VCR.

You can check that the VCR features have returned to their original factory settings by pressing the **PROGRAM** button, number button "5", and then the **DISPLAY** button to display the 2nd **VCR SETUP** menu.

VCR SETUP Menus

1st VCR SETUP Menu

To display the 1st **VCR SETUP** menu, press the **PROGRAM** button, and then number button "4" on the remote control. The **NORMAL/CATV** and **AUTOPROGRAM** functions are necessary for initial installation of your VCR and are explained on pages 4-5.

2nd VCR SETUP Menu

To display the 2nd **VCR SETUP** menu, press the **PROGRAM** button, then number button "4", and then the **DISPLAY** button on the remote control.

DISPLAY (ON/OFF)

The VCR's displays automatically appear on the TV screen whenever you turn it on, stop, fast forward, etc. If you do not want these displays to appear automatically, you can turn them off.

Press "1"
to Change

1
2

Press number button "1" when the 2nd **VCR SETUP** menu is displayed to turn the on-screen display on or off.

- When **(ON)** appears at the right-hand side of the display, the on-screen displays will appear automatically on your TV whenever you change the VCR's status.
- When **(OFF)** appears at the right-hand side of the display, the on-screen displays of the VCR's status will not appear on the TV except for the channel number display when you change channels. This is useful if you are copying tapes and do not want the displays to appear.

Note: When the on-screen displays are turned **OFF**, you can still bring them to the TV screen by pressing the **DISPLAY** button on the remote control.

VCR Menus (continued)

AUTO PLAY (ON/OFF)

The *AUTO PLAY* feature tells your VCR if you want it to automatically begin playback when you insert a cassette with its record-protect (safety) tab removed.

Press "2"
to Change



Press number button "2" when the 2nd *VCR SETUP* menu is displayed to turn the *AUTO PLAY* feature on or off

- When (*ON*) appears at the right hand side of the display, the VCR will automatically begin playback when you insert a cassette with its record-protect tab removed
- When (*OFF*) appears at the right hand side of the display, the VCR will **not** automatically begin playback when you insert a cassette with the record-protect tab removed.

Note: The VCR does not automatically begin playback when you insert a cassette with the record-protect tab intact. The *AUTO PLAY* feature has no affect.

REPEAT PLAY (ON/OFF)

The *REPEAT PLAY* feature tells the VCR if you want it to automatically play a tape over and over

Press "3"
to Change



FOR MORE
DETAILS

Press number button "3" when the 2nd *VCR SETUP* menu is displayed to turn the *REPEAT PLAY* feature on or off

- When (*ON*) appears at the right-hand side of the display, the VCR will play to the end of a tape (or until it reaches a long blank portion on the tape), automatically rewind the tape, and then play the tape again. The *REPEAT* indicator will appear in the VCR's display panel during repeat play

Notes: Special effects can not be used during the play cycles.

Pressing any other function button will also cancel repeat play until the *STOP* button and then the *PLAY/X2* button on the VCR (or the *PLAY* button on the remote control) is pressed again.

The time counter's memory-stop feature does not function during repeat play

If the tape has a blank (unrecorded) section longer than 30 seconds, the VCR will automatically rewind when it reaches the blank section. Erased portions of the tape are not considered blank. You may want to record over long blank portions (especially at the beginning) to prevent the VCR from rewinding at this point

- When (*OFF*) appears at the right-hand side of the display, the VCR will only play the tape once and then stop.

REMOTE (VCR1/VCR2) Feature

The remote control that came packed with your VCR has buttons labeled *VCR 1* and *VCR 2*. These buttons let you control two compatible VCR's with the remote control.

You tell your VCR which button you want it to respond to by changing the *REMOTE (VCR1/VCR2)* menu function

Press "4"
to Change



Press number button "4" when the 2nd *VCR SETUP* menu is displayed to switch between (*VCR1*) and (*VCR2*).

Note: The VCR will only respond to the *VCR 1* or *VCR 2* button on the remote. To control the VCR, you must press the button on the remote control that corresponds to the *REMOTE* menu setting.

- Set this display to (*VCR1*) if you want your VCR to respond to the *VCR 1* button on the remote control
- Set this display to (*VCR2*) if you want your VCR to respond to the *VCR 2* button on the remote control. If you change this setting to (*VCR2*), the remote control will no longer control the VCR unless you press the *VCR 2* button.

If you own two RCA VCR's, you can set your new VR512A to respond to the *VCR 2* button. Your other VCR will probably respond to the *VCR 1* button. A compatibility chart is listed on page 31

Video Cassettes

We recommend that RCA cassettes be used with this VCR. The tape in RCA cassettes is of high-quality formulation, intended for use with multi-speed VHS video cassette recorders. It has been manufactured to critical specifications for excellent performance with RCA VCR's. Use of tape not meeting these specifications could considerably reduce the performance of your VCR.

Use of poor quality tapes or tapes that have been damaged or mishandled can contaminate the VCR heads. This can cause a snowy picture or a missing picture during playback. Because there is no control over the type of tape purchased or rented by consumers, **head cleaning is not covered by your warranty.** It is considered normal maintenance.

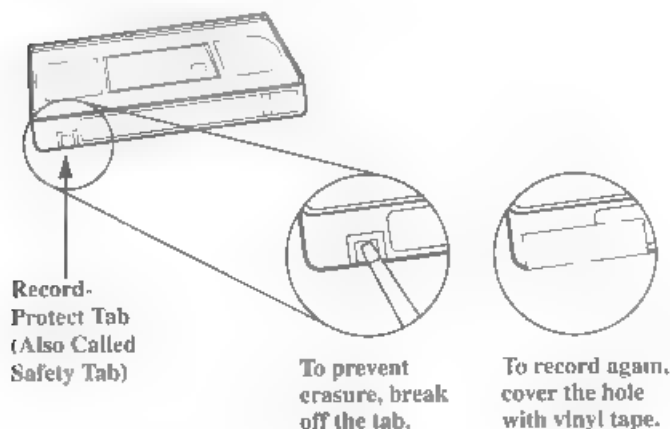
The VR512A's automatic head cleaning system minimizes the need for optional cleaners and professional head cleaning. If a snowy picture or missing picture condition persists, consider the use of a chemical non-abrasive head cleaning tape (RCA Stock No. AV009W). It is available from your dealer and many electronic supply stores. Be sure to follow the directions with the head cleaning kit carefully. Improper use of a head cleaner may damage your VCR.

Erasing Tapes


You can use your video cassettes over and over again. To erase a previous recording, just record over it.

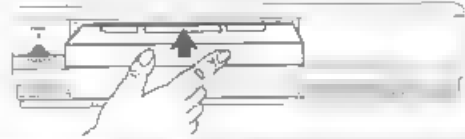
Erase Protection: Record-Protect (Safety) Tab

To prevent erasing a recording you want to keep, remove the record protect (safety) tab from the back of the cassette *as shown below*. Recording is impossible when this tab is removed. To record again on a cassette that has the tab removed, simply cover the hole with vinyl tape.



Inserting and Removing Cassettes

Insert a cassette. Push the cassette gently through the door of the cassette compartment until the VCR mechanism pulls it into the VCR. Inserting a cassette will automatically turn on the VCR's power. The cassette-in indicator () will light when a cassette is properly inserted into the VCR.



Caution: Insert a cassette only one way with the tape windows facing up and the record-protect (safety) tab facing out.

STOP/EJECT Button



Eject and remove a cassette. Rewind the cassette before ejecting it from the VCR. When the VCR is in the stop mode, press the *STOP/EJECT* button on the VCR (or the *EJECT* button on the remote control). The cassette is partially ejected automatically by the VCR. Gently pull the cassette straight forward out of the compartment. Place the cassette in its case and store upright.

Cassette Care and Storage

Follow these directions for continued high-quality performance from your cassettes.

- When you are finished with a cassette, rewind it and remove it from the VCR.
- Never attempt to force open the cassette door.
- Store cassettes vertically in their protective cases at normal room temperatures. Avoid extreme heat and humidity. Extreme heat can warp the cassette or cause the tape to stretch excessively.
- Be especially careful to keep dust from entering the cassette and the VCR mechanism. All dust is abrasive, and it will cause excessive wear of both the tape and the VCR's recording/playback heads.

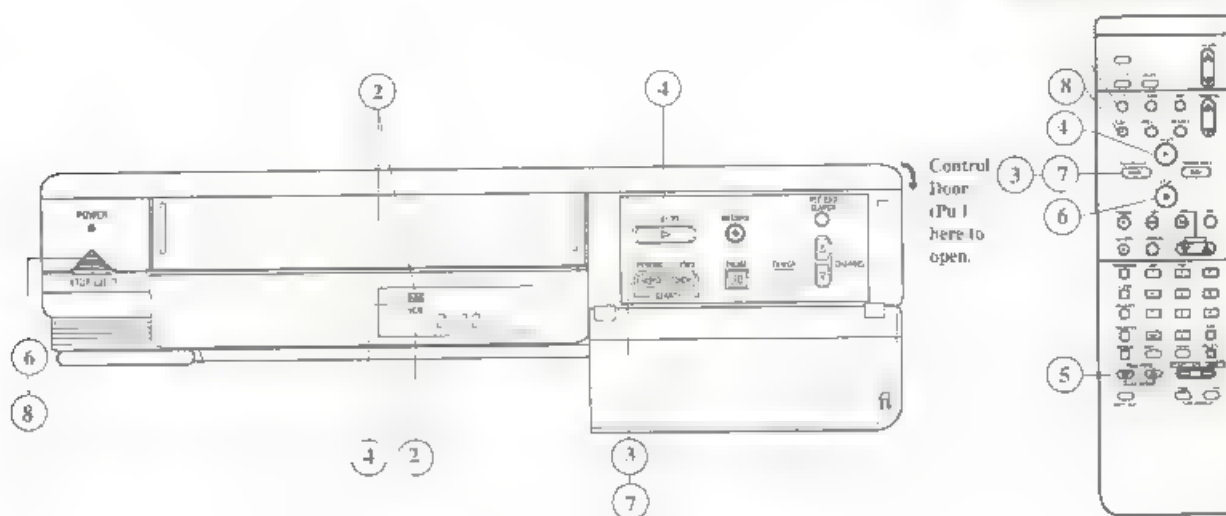
Playback

Follow the steps below to play back a tape in the VCR. The VCR will automatically select the correct playback speed and the appropriate indicator will light in the VCR's display panel.

Some of the buttons on the VCR and remote control operate differently during playback. These special playback features are described on the following pages.

Playback Guide

Press **VCR 1** (or **VCR 2**) button to put remote in "VCR mode". Details on page 10.



- 1 Turn on the TV and tune it to the "VCR channel" (3*, 4* or video input).
* The TV must be tuned to the same channel you selected with the **CH 4** switch on the back of the VCR.
- 2 Insert a cassette in the VCR. (The cassette in and VCR indicators will light.)
Note: The tape will automatically begin playback if the record protect (safety) tab on the cassette has been removed and the **40 TO 1 LA** menu function is set to **ON** as described on page 15.
- 3 Rewind the tape if necessary. Press the **REWIND** button on the VCR (or the **REW/SEARCH** button on the remote control).
- 4 To begin playback, press the **PLAY/X2** button on the VCR (or the **PLAY** button on the remote control). The playback indicator (▶) appears in the display panel.
- 5 Adjust tracking if necessary. If the tape was recorded on a different VCR, streaks may appear. Press the **TRACKING/LOCK** up or down button on the remote control to move the streaks up or down and out of the picture. Details are on page 18.
- 6 When you are finished, press the **STOP/EJECT** button on the VCR (or the **STOP** button on the remote control).
- 7 To rewind the cassette, press the **REWIND** button on the VCR (or the **REW/SEARCH** button on the remote control).
- 8 To eject the cassette from the VCR, press the **STOP/EJECT** button on the VCR again (or the **EJECT** button on the remote control).

Playback Features

Picture Search and X2 (Double Speed) Playback

The buttons for rewind (*REWIND/SEARCH* on the VCR and *REW/SEARCH* on the remote control) and fast-forward (*FFWD/SEARCH*) become the picture search buttons when the VCR is playing back a tape

- During playback, press the *FFWD/SEARCH* button to visually search the tape forward at a higher speed. To return to normal playback, press the *FFWD/SEARCH* button again (or press the *PLAY/X2* button on the VCR or *PLAY* button on the remote control)
- During playback, press the *REWIND/SEARCH* button on the VCR (or the *REW/SEARCH* button on the remote control) to visually search the tape in reverse at a higher speed. To return to normal playback, press the *REWIND/SEARCH* button again (or press the *PLAY/X2* button on the VCR or *PLAY* button on the remote control)
- For even faster forward or reverse searching, press and hold the *FFWD/SEARCH* or *REWIND/SEARCH* button. To return to normal playback, release the button
- During playback, press the *PLAY/X2* button on the VCR (or the *X2* button on the remote control) to start double speed playback. To return to normal playback, press the *PLAY/X2* button on the VCR (or the *X2* button on the remote control)

The sound is turned off during picture search and double speed playback because it would not be understandable at the high speed

Some horizontal lines or bars in the picture are normal when you are searching and playing the tape at double speed. The picture will be best for tapes recorded at the SP or SLP speed, although it can be viewed from tapes recorded at the LP speed

During picture search, horizontal lines (noise bars) may interfere with the time-counter display. Press one of the *TRACKING/V-LOCK* buttons on the remote control to move the noise bars up or down and out of the picture.

Auto Tracking and *TRACKING/V-LOCK* Buttons

The VCR has an automatic tracking system. You may occasionally need to use the *TRACKING/V-LOCK* buttons when you play a tape in your VCR that was recorded on a different VCR or camcorder

When you play a tape not recorded on your VCR, streaks may appear if the recorded tracks on the tape do not align precisely with the playback heads. To remove the streaks and align the heads with the tape tracks, press one of the *TRACKING/V-LOCK* buttons on the remote control to move the streaks up or down and out of the picture

Press one of the *TRACKING/V-LOCK* buttons during stop-action (pause) viewing to reduce picture "jitter" (picture bouncing up and down)

The VCR will automatically set the tracking to the normal position whenever you insert a tape

The *TRACKING/V-LOCK* buttons only affect tape playback. They have no effect during recording.

Pause for Stop-Action Playback

Press the *PAUSE* button during playback to "stop the action". This lets you examine all the details of the scene—similar to looking at a single frame of a movie film. Press the *PAUSE* button again to return to normal playback.

If horizontal lines or noise bars appear in the picture, press the *SLOW* button on the remote control, and then press one of the *TRACKING/V-LOCK* buttons to move the lines out of the picture

Caution: Using stop-action on a single frame of the picture for a long time can wear the tape. Use *STOP* instead of *PAUSE* to interrupt playback for an extended time. To help prevent excessive tape wear, the VCR will automatically switch from pause to stop after about three minutes.

The picture will be best for tapes recorded at the SP or SLP speed, although it can be viewed from tapes recorded at the LP speed

Frame Advance and Instant Search

Frame advance lets you view one stop-action frame after another.

- Press the *PAUSE* button to begin stop-action viewing. Then press the *FADV* (frame advance) button on the remote control each time you want to view the next frame of the scene. Press the *PAUSE* button to resume playback at normal speed.
- Instant Search. If you press the *FADV* button during normal playback, the tape will automatically advance approximately 60 seconds of recorded tape time and then return to normal playback. This is useful for skipping short program segments.

Frame advance is designed for use at the SP or SLP speed. It may be used on tapes recorded at LP speed, but the picture quality may not be as good

Slow-Motion Playback

During playback, press the *SLOW* button on the remote control to begin slow-motion playback. To return to normal playback, press the *SLOW* button again or press the *PLAY/X2* button on the VCR (or the *PLAY* button on the remote control). Sound is turned off during slow-motion playback.

Press the *SLOW* up or down button on the remote control to change the slow-motion speed. Press down to decrease the speed or up to increase the speed

The VCR will automatically switch from slow-motion playback to the stop mode after about five minutes.

It is normal to occasionally see some streaks in the picture during slow motion. Use one of the *TRACKING/V-LOCK* buttons on the remote control to move them out of the picture

Slow motion is designed to work at the SP and SLP speeds. For best special effects performance and longest recording time, the SLP speed is recommended

Playback Features (continued)

On-Screen Displays

The VCR's on-screen displays appear automatically on the TV when the *DISPLAY (ON/OFF)* menu is set to *ON* as described on page 14. The displays appear whenever you turn on the VCR or change the VCR's status (stop-to-play, play-to-stop, change channels, etc.)

The VCR's on-screen displays, the time counter, and the time counter with memory stop can be manually displayed by pressing the *DISPLAY* button on the remote control.

- Press the *DISPLAY* button once to display the normal displays on the TV screen.
- Press the *DISPLAY* button again (while the normal displays still appear on the TV screen) to display only the time counter on the TV screen. The time counter will remain on the TV screen.

Notes: Press the *COUNTER* button on the remote control to switch between the current time and the time counter in the VCR's display panel.

Press the *MEMORY* button on the remote control to turn the memory-stop feature on or off.

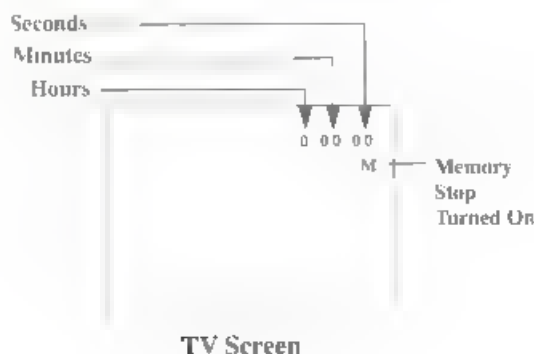
- Press the *DISPLAY* button again to remove the time counter from the TV screen.

Time Counter with Memory-Stop Feature

The time-counter display shows the actual elapsed time it takes to record a program or play back a segment of a pre-recorded tape. It helps you quickly locate the end of programs you taped. For example, if you recorded a 30-minute program at the beginning of the tape, you will be able to insert the tape, display the time counter, and fast forward the tape until the time counter reads "0:30:00". This will be the approximate end of your 30-minute recording.

You can note the time-counter reading at the beginning and end of each program for future reference. The label kit provided with RCA tapes can be used to list programs and time counter readings.

- Press the *COUNTER* button on the remote control to switch between the current time and the time counter in the VCR's display panel, or press the *DISPLAY* button twice on the remote control to display the time counter on the TV screen.



Whenever the time counter is displayed, press the *CLEAR* button on the remote control to set the time counter to a reading of "0:00:00".

Notes: The time counter is automatically reset to "0:00:00" whenever the tape is ejected from the VCR.

If you rewind the tape farther back than a counter reading of "0:00:00", a minus (-) will appear in front of the time.

Memory-Stop Feature

The memory-stop feature allows you to quickly return to a counter reading of "0:00:00M" from any point on the tape. This is especially convenient when you want to watch a segment of the tape repeatedly. You may also discover other useful applications for this feature.

Using the Time Counter's Memory-Stop Feature

1. To turn on the memory-stop feature, press the *MEMORY* button on the remote control. An "M" appears to the left of the time counter in the VCR's display panel and under the time counter on the TV screen. The time counter's memory stop feature is now turned on. The VCR will stop rewinding or fast-forwarding whenever it reaches a counter reading of "0:00:00M".
2. Whenever you are at a spot on the tape that you want to return to quickly, press the *CLEAR* button to reset the counter to "0:00:00M" at that spot.
3. Later, after you have moved somewhere else on the tape, you can quickly return to your original spot (where you set the counter to "0:00:00M") by pressing the *STOP/EJECT* button on the VCR (or *STOP* button on the remote control) and then the *REWIND* or *FWD* button. Make sure the "M" is displayed if you want the VCR to stop at "0:00:00".

Notes: If you are rewinding the tape and the VCR stops at "0:00:00M", press *REWIND* again to continue rewinding.

If you press the *FWD* button and the time counter never reaches "0:00:00M" between that point and the end of the tape, the VCR will continue to fast forward to the end of the tape, switch to rewind, and then stop when the counter reaches "0:00:00M".

Playback Features (continued)

Time Search

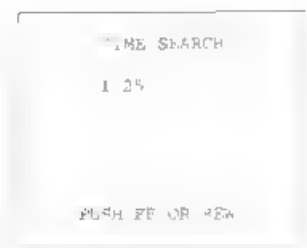
The VCR will automatically fast forward or rewind the cassette in the VCR a specified amount of time and begin playback.

1. Insert the cassette into the VCR, and press the *TIME SEARCH* button on the remote control. The following menu will appear on the TV screen.



2. Press three number buttons to enter the hour and/or minutes of tape time you want the VCR to skip. The first number is hours and the next two numbers are minutes. For example, press number buttons "1", then "2", then "5", for one hour and 25 minutes. After you enter a time, the following screen will appear

Note: Enter the three numbers within ten seconds or the VCR will automatically remove the display from the TV screen



3. Press the *F.FWD* or *REWIND* button to start the VCR searching forward or backward. The VCR will skip the length of tape time you enter and then begin playback.

To stop time search: Press the *STOP/EJECT* button on the VCR (or the *STOP* button on the remote control).

Checking TV Channels During Playback

During playback, you can monitor TV channels without missing any of the tape. The VCR will enter the play-pause mode and the current TV channel selected will be displayed. The remote control must be in the "VCR mode" for this feature to operate

1. During playback, press the *VCR 1* (or *VCR 2*) button and then press the *MONITOR* button on the remote control. The VCR will enter the play-pause mode and the following display will appear on the TV screen



2. You can now change channels with the *CHANNEL* up and down buttons.

Note: If the VCR remains in the monitor mode for several minutes, it will automatically enter the stop mode.

3. Press the *MONITOR* button to start the tape playing again

Quasi S-VHS Playback

The VCR is capable of playing back tapes that have been recorded in the S-VHS format. This allows you to play back your tapes recorded in S-VHS from other VCR's or camcorders. The playback quality will be standard VHS.

Recording

Recording Guides

The guides on these two pages show you how to make recordings on the VCR.

- The guide on the bottom of this page shows you how to record on the VCR with the TV turned off
- The first guide on the next page shows you how to record a program on the VCR and watch the same program on the TV
- The second guide on the next page shows you how to record one program on the VCR while watching a different program on the TV

This VCR also features express and timer recording. It will turn itself on, make a recording, and turn itself off while you are away.

- Details on express recording (XPR, are on pages 24-25.
- Details on timer recording are on pages 26-28

Recording Speeds

To select one of the VCR's three recording speeds, press the tape **SPEED** button on the remote control. The appropriate indicator (**SP**, **LP**, or **SLP**) appears in the VCR's display panel. The information below will help you decide which tape speed to use when recording.

Notes: The VCR automatically selects the appropriate tape speed for playback.

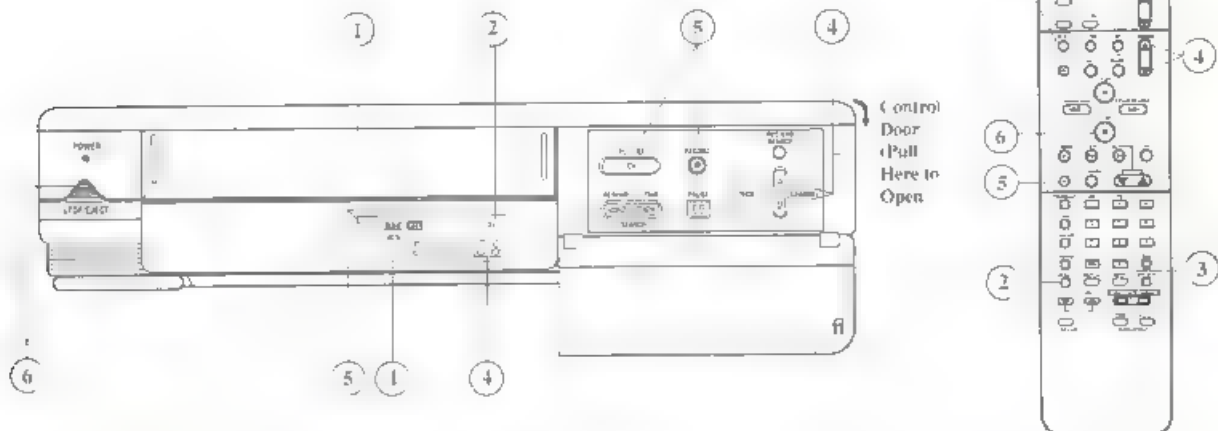
Your VCR's special effects (stop-action, search, slow-motion, double speed playback, and frame advance) are designed for optimum performance at the **SP** and **SLP** speeds.

We recommend **SLP** speed for the longest recording time.

- **SP** (Standard Play) provides the best picture but the shortest recording time (2 hours with a T-120 tape). Video recorded at this speed has the least picture noise ("snow") in normal playback.
- **LP** (Long Play) provides twice the recording time as **SP** (4 hours with a T-120 tape). This speed is provided primarily for playing tapes recorded on older machines that do not have **SLP** speed.
- **SLP** (Super Long Play) provides three times the recording time as **SP** (6 hours with a T-120 tape). **SLP** has slightly more picture noise ("snow") than **SP** in normal playback. This may not be noticeable.

Recording With TV Turned Off

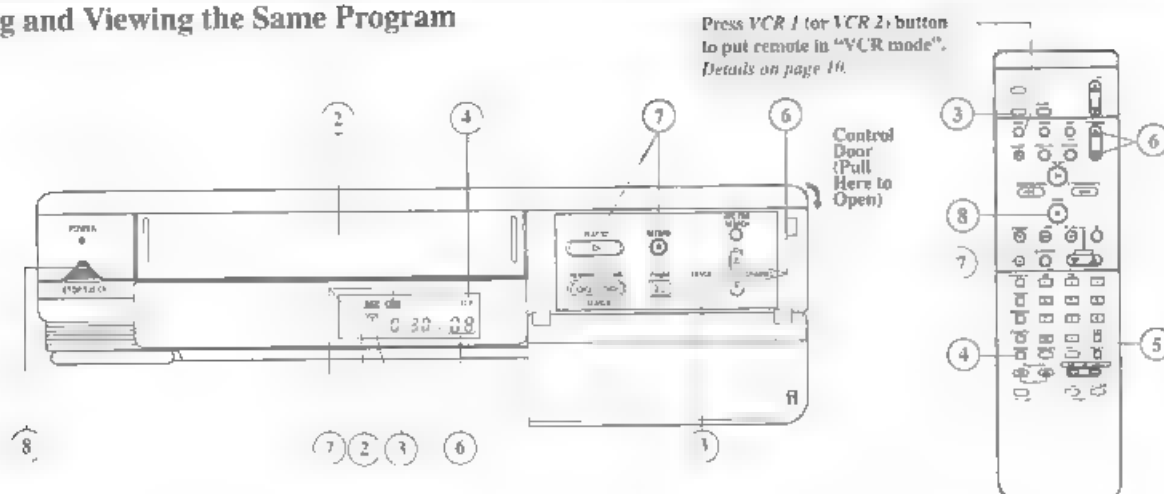
Press **VCR 1** (or **VCR 2**) button to put remote in "VCR mode". Details on page 10.



- 1 Insert a cassette with the record-protect (safety) tab intact (The cassette-in and VCR indicators will light.)
- 2 Press the tape **SPEED** button on the remote control to select a recording speed. The tape speed indicator (**SP**, **LP**, or **SLP**) appears in the VCR's display panel.
- 3 Make sure the line indicator (**L**) does not appear in the VCR's display panel unless you want to record from the VCR's **AUDIO** and **VIDEO IN** jacks. If (**L**) appears, press the **INPUT** button on the remote control to turn it off.
- 4 To select the channel you want to record, press the **CHANNEL** up or down button. The channel number you select will appear in the VCR's display panel.
- 5 To start recording, press the **RECORD** and **PLAY/X2** button on the VCR at the same time (or the **RECORD** button on the remote control). The record indicators appear in the VCR's display panel.
- 6 When you are finished, press the **STOP/EJECT** button on the VCR (or the **STOP** button on the remote control).

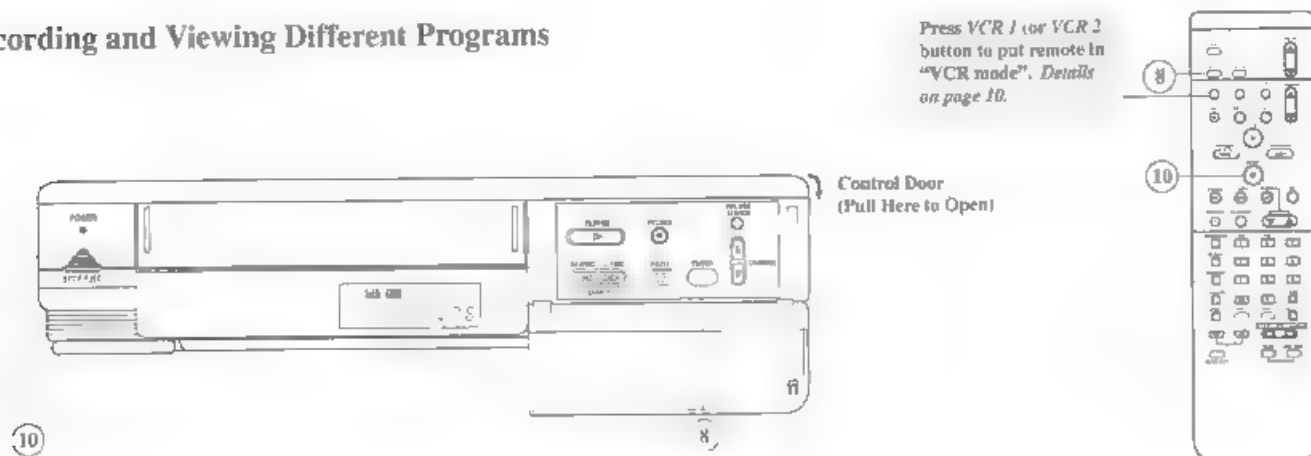
Recording (continued)

Recording and Viewing the Same Program



- 1 Turn on the TV and tune it to the "VCR Channel" (3*, 4*, or video input).
*The TV must be tuned to the same channel you selected with the **3CH 4** switch on the back of the VCR.
- 2 Insert a cassette with the record-protect (safety) tab intact. (The cassette-in indicator will light.)
- 3 Make sure the **VCR** indicator appears in the VCR's display panel. If it does not appear, press the **TV/VCR** button to turn it on.
- 4 Press the tape **SPEED** button on the remote control to select a recording speed. The tape speed indicator (**SP**, **LP**, or **SLP**) appears in the VCR's display panel.
- 5 Make sure the line indicator (**L**) does not appear in the VCR's display panel unless you want to record from the VCR's **AUDIO** and **VIDEO IN** jacks. If ("**L**") appears, press the **INPUT** button on the remote control to turn it off.
- 6 Press the **CHANNEL** up or down button on the VCR to select the channel you want to record. The channel number appears in the VCR's display panel.
- 7 Press the **RECORD** and **PLAY/X2** button **at the same time** on the VCR (or the **RECORD** button on the remote control) to start recording. The record indicator appears in the VCR's display panel.
- 8 Press the **STOP/EJECT** button on the VCR (or the **STOP** button on the remote control) when you are finished.

Recording and Viewing Different Programs



To record one program on the VCR and watch another program on the TV, follow steps 1 through 7 above and then:

- 8 Press the **TV/VCR** button to turn off the **VCR** indicator.
- 9 Select the other channel you want to watch with the TV's channel buttons.
- 10 Press the **STOP/EJECT** button on the VCR (or the **STOP** button on the remote control) when you are finished.

Note: If you want to watch what the VCR is recording, press the **TV/VCR** button to turn on the **VCR** indicator. Then tune your TV to the "VCR channel" (3, 4, or video input).

Recording Features

Pause During Recording

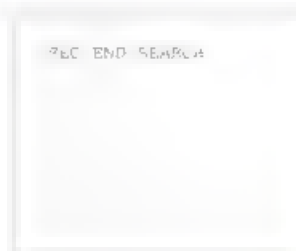
Press the *PAUSE* button when you are recording to prevent recording short passages of unwanted material. Press the *PAUSE* button again when you are ready to resume recording.

Caution: Avoid pausing for more than three or four minutes because the spinning heads that do the recording are still in contact with the tape and will eventually wear off the active material. This can cause streaks or spots in the picture when you play the worn part of the tape (called dropouts). To help prevent excessive tape wear, the VCR will automatically switch from pause to stop after about five minutes.

Record-End Search

The VCR will automatically locate the approximate point on the tape where recording ends and a blank portion (one that has never been recorded on) of tape begins. The VCR can be in the playback, fast-forward, or stop mode when you start the search.

1. During stop, play, or fast-forward, press the *REC* (record) *END SEARCH* button. The VCR will automatically begin searching, and the following display will appear on the TV screen.



2. When the VCR reaches the blank portion of the tape, it will enter the stop mode. Play back a portion of the tape to locate the precise point where you want to begin recording.

Notes: If the *REC END SEARCH* button is pressed while the VCR is in a blank portion of the tape, the VCR will rewind the tape to the end of the recorded portion and then stop.

To stop *REC END SEARCH* in progress, press the *STOP/EJECT* button on the VCR (or the *STOP* button on the remote control).

Express Recording (XPR)

Express recording (XPR) lets you record up to four hours without programming the timer. It also allows you to start (or continue) recording immediately or delay recording up to 24 hours. *When the recording is finished, the VCR will turn off automatically.*

The clock must be set and a cassette with the record-protect (safety) tab intact must be in the VCR before you can express record.

Only two buttons on the remote control are used to express record (XPR).



Immediate Start Express Recording (XPR)

If you want the VCR to start recording immediately or continue a recording you have already started, *follow the simplified instructions below or the detailed instructions on the next page.*

Only the **LENGTH** button is used for immediate express recording. Each time you press the **LENGTH** button the recording time is extended.

1st Press	Activates XPR Recording
2nd Press	30 minutes XPR
3rd Press	1 hour XPR
4th Press	1 1/2 hours XPR
5th Press	2 hours XPR
6th Press	3 hours XPR
7th Press	4 hours XPR
8th Press	Recording will stop after a few seconds

Simplified Instructions for Immediate Start XPR

1. Turn on the TV and tune it to your "VCR channel".
2. Insert a cassette with the record-protect (safety) tab intact into the VCR. (Rewind if necessary.)
3. Select the channel on the VCR you want to record.
4. Select the tape recording speed with the tape **SPEED** button on the remote control.
5. Press the **LENGTH** button on the remote control (at least twice) to select the desired recording time ["0:30" (30 minutes) to "4:00" (4 hours)]

Delayed Start Express Recording (XPR)

If you want the VCR to start the recording later (up to 24 hours), *follow the simplified instructions below or the detailed instructions on the next page.*

Simplified Instructions for Delayed Start XPR

1. Turn on the TV and tune it to the "VCR channel".
2. Insert a cassette with the record-protect (safety) tab intact into the VCR. (Rewind if necessary.)
3. Select the channel you want to record.
4. Select the tape recording speed with the tape **SPEED** button on the remote control.
5. Press the **START** button on the remote control. The time in the on-screen display will skip to the next half-hour. Keep pressing the **START** button until the time you want to start recording (up to 24 hours ahead) appears on the display.
6. Press the **LENGTH** button to select the amount of recording time ["0:30" (30 minutes) to "4:00" (4 hours)].
7. **Turn off the VCR.** Press the **POWER** button on the VCR (or the **OFF** button on the remote control).

To Cancel Delayed Start XPR Before the Recording Begins

Repeatedly press the **LENGTH** button until the XPR display on the TV screen shows "0:00". After a few seconds the display will disappear from the TV screen.

To Stop XPR After the Recording Has Started

Repeatedly press the **LENGTH** button until the XPR display on the TV screen shows "0:00". After a few seconds the display will disappear from the TV screen.

-OR-

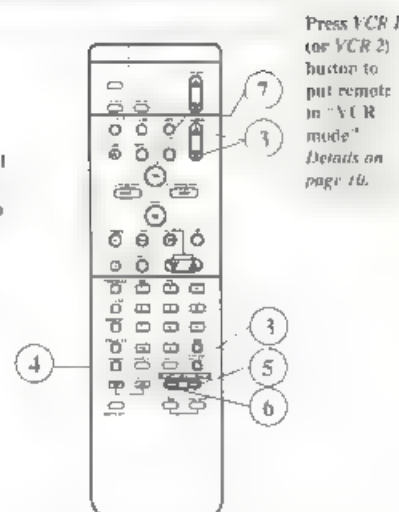
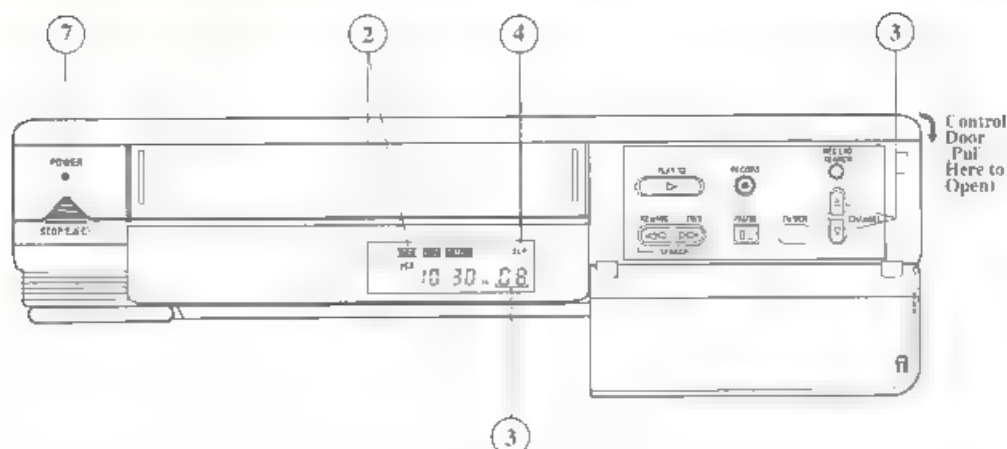
Front of VCR Press the **POWER** button and then the **STOP/EJECT** button on the VCR within 10 seconds.

-OR-

Remote Control Press the **VCR 1** button and then the **STOP** button on the remote control within 10 seconds.

Note: If your VCR is set to respond to the **VCR 2** button, press the **VCR 2** button instead of the **VCR 1** button.

Express Record (XPR) (continued)



Press VCR 1 (or VCR 2) button to put remote in "VCR mode" Details on page 16.

Detailed Instructions for Express Recording (XPR)

Make sure the clock is set to the correct time before you begin express recording

- 1 Turn on the TV and tune it to the "VCR channel"
- 2 Insert a cassette with the record-protect (safety) tab intact (cassette-in indicator will light). Rewind if necessary
Note: Inserting a cassette will automatically turn on the VCR
- 3 Select the channel you want to record with the **CHANNEL** buttons.
Notes: If a channel number does not appear in the VCR's display panel, press the **INPUT** button on the remote control.
 You can also record from a device connected to the **AUDIO** and **VIDEO IN** jacks (line input) of the VCR. Press the **INPUT** button on the remote control to select the line input. (An "L" appears instead of the channel number in the VCR's display panel.)
- 4 Select a recording speed by pressing the tape **SPEED** button on the remote control. The speed selected (**SP**, **LP**, or **SLP**) appears in the VCR's display panel
- 5 To start recording immediately or continue a recording that has started, press the **LENGTH** button on the remote control and the following display will appear on your TV screen.

shows the amount of recording time you have selected. Once you have selected a recording time, the display will disappear from the TV screen after a few seconds.

- You can see the time remaining on the XPR recording at any time by pressing the **LENGTH** button. If you wish to extend the time, press the **LENGTH** button while the display is on the TV screen
- 6 To start recording at a later time (delayed XPR), press the **START** button on the remote control and the following display will appear on the TV screen.
- To select a beginning recording time within the next 24 hours, repeatedly press the **START** button until the time you want the recording to begin appears on the display
Notes: The first time you press the **START** button, the display will skip to the next half-hour. Example: If you press the **START** button at 9:15 AM, the time displayed will be 9:30 AM. The time will advance one-half hour each time you press the **START** button.
- After you have selected the starting time, you must select the length within 5 seconds by pressing the **LENGTH** button. Press the **LENGTH** button repeatedly to select the length of the XPR recording (from 30 minutes to 4 hours)

- Press the **LENGTH** button at least twice. The first press brings the display to the TV screen. The second press starts XPR recording. The **REC**, **▶**, and **TIMER** indicators will appear in the VCR's display panel
- Increase the length of the recording time by pressing the **LENGTH** button repeatedly. The display on the TV screen

- 7 Turn off the VCR for delayed start XPR. The **TIMER** indicator will appear in the VCR's display panel

Notes: If the VCR is on when delayed express recording is to begin, **TIMER** will flash in the VCR's display panel and a warning will come on the TV screen

If the VCR is express recording when a timer recording is to begin, the express recording will take priority. Make sure your recording times do not overlap.

Programming the Timer

The programmable clock/timer permits unattended recording of up to eight different TV programs. The timer is actually a small computer which will turn on the VCR at the time you select, record for a selected length of time, and then turn off the VCR—all automatically without you being there

You can program the timer to do the following:

- Record a program on a single day up to one year in advance (*NORMAL PROGRAM*)
- Record a program at the same time Monday through Friday (*DAILY PROGRAM*)
- Record a program on one certain day of every week (*WEEKLY PROGRAM*).

Simplified Programming Instructions

- 1 Turn on the TV and tune it to your "VCR channel" (3, 4, or video input)
- 2 Turn on the VCR or insert a cassette with the record-protect (safety) tab intact. Rewind if necessary
- 3 Press the *PROGRAM* button on the remote control.
- 4 Watch the display on the TV screen. It will prompt you through the rest of the programming instructions.
- 5 **Turn off the VCR.** The VCR must be turned off at the time the timer program is to begin.

Things to know before you start:

- The clock must be set to the correct time before you program the timer
- You can program the timer up to one year before the TV program is to be recorded
- You can correct an error in the program any time before the last step by pressing the *CLEAR* button on the remote control

[1]

Turn on the TV and VCR. Tune the TV to the "VCR channel" (3, 4, or video input) so you can see the *TIMER PROGRAMMING* menu on the TV screen.

Make sure the VCR's clock is set to the correct time. Reset the clock if necessary. Press the *PROGRAM* button on the remote control



The program menu appears on the TV screen. Press the number button "1" on the remote control to display the *TIMER PROGRAMMING* menu

[2]

The *TIMER PROGRAMMING* menu appears on the TV. The display will prompt you to select the type of program. The lowest program number will appear automatically.

Note: If all eight of the programs are full, the *FULL* message appears. You must clear a program before you can enter a new one. See "Clearing a Timer Program" on the next page



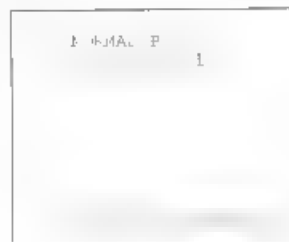
Press the corresponding number button on the remote control

- Press "1" to enter a *NORMAL PROGRAM*
- Press "2" to enter a *DAILY PROGRAM*
- Press "3" to enter a *WEEKLY PROGRAM*

[3]

The display will prompt you to select a channel number. Enter the channel number you want to record.

Note: To record from the line input (*AUDIO* and *VIDEO IN* jacks), press the *INPUT* button on the remote control. *VIDEO* appears instead of the channel number in the on-screen display



- To enter channels up to 99, press two number buttons. For example, press "0", then "8" for channel 8.
- To enter cable-TV channels over 99, press the "100" button and then two number buttons.

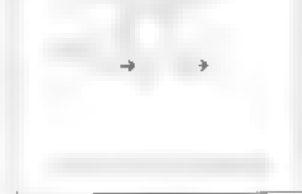
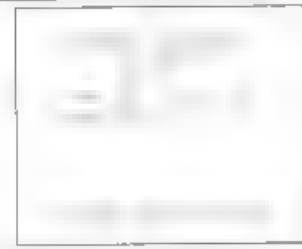
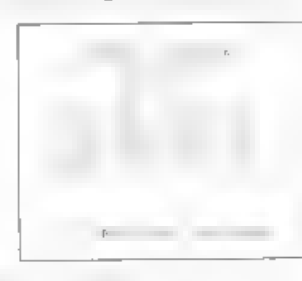

[4]

The display will prompt you to enter the recording start time



Press four number buttons to enter the hour and minutes. For example, press "0", then "9", then "3", then "0" for 9:30. (Always press "0" before a single-digit hour or minute.)

Programming the Timer (continued)

- | | | |
|---|--|--|
| <p>[5] The display will prompt you to select either AM or PM</p> |  | <p>Press number button "1" for AM or press "2" for PM
 Note If you enter "12:00", the display will prompt you to enter "1" for midnight or "2" for noon</p> |
| <p>[6] The display will prompt you to select the time you want the recording to end.</p> |  | <p>Press four number buttons to enter the hour and minutes. For example, press "1", then "0", then "0", then "0" for 10:00. (Always press "0" before a single-digit hour or minute)
 Note: AM or PM will be automatically selected.</p> |
| <p>The display will show <i>START DATE</i> followed by the current or next date and day. If you want to start recording on that date, skip to Step 8</p> <p>[7] The display will show a tape speed. If you want to record at a different speed, press the tape <i>SPEED</i> button on the remote control. If you want to record at the speed displayed, skip to Step 8</p> |  | <p>If you want to start recording on a future date, enter the date by pressing four number buttons. For example, press "0", then "8", then "0", then "4" to begin recording on August 4th. The year and day of the week are displayed automatically after you enter the date and day. (Always press "0" before a single-digit month or day.)</p> |
| <p>[8] Press the <i>PROGRAM</i> button to enter your timer program and return to the original program menu. Additional programs may be entered by repeating Steps 2-8</p> |  | <p>Press the <i>PROGRAM</i> button again when you are finished to remove the program menu from the TV screen.</p> |
| <p>[9] Turn off the VCR. The VCR will not make a timer recording if it is turned on at the time the timer recording is to begin.
 Note: If the VCR is not turned off at least two minutes before the timer recording is scheduled to begin, the TIMER indicator will flash and <i>TURN VCR OFF FOR TIMER RECORDING</i> will appear on the TV screen.</p> | | |

Check the Timer Programs

Programs can be checked whenever the VCR is turned on

1. Press the *PROGRAM* button on the remote control to display the program menu.
2. Press number button "2" for *PROGRAM REVIEW*. The TV screen will display for eight seconds the information you entered for the lowest program number. Then the display changes to the next higher program number, and so on, until all the program information has been displayed.
3. Press number button "2" again (or the *DISPLAY* button) if you want to view the next program information without waiting eight seconds.
4. When you are finished, press the *PROGRAM* button to remove the program menu from the TV screen.

Clear a Timer Program

1. Press the *PROGRAM* button on the remote control to display the program menu.
2. Press number button "2" to select *PROGRAM REVIEW*. The TV screen will display for eight seconds the information you entered for the lowest program number. Then the display changes to the next higher program number, and so on, until all program information has been displayed.
3. Press number button "2" again (or the *DISPLAY* button) if you want to view the next program information without waiting eight seconds.
4. Press the *CLEAR* button on the remote control when the program you want to clear appears on the TV screen.
5. Press the *PROGRAM* button again to remove the program menu from the TV screen.

Notes: Normal timer programs clear automatically when the recording is finished.

Daily and weekly programs remain in the timer indefinitely.

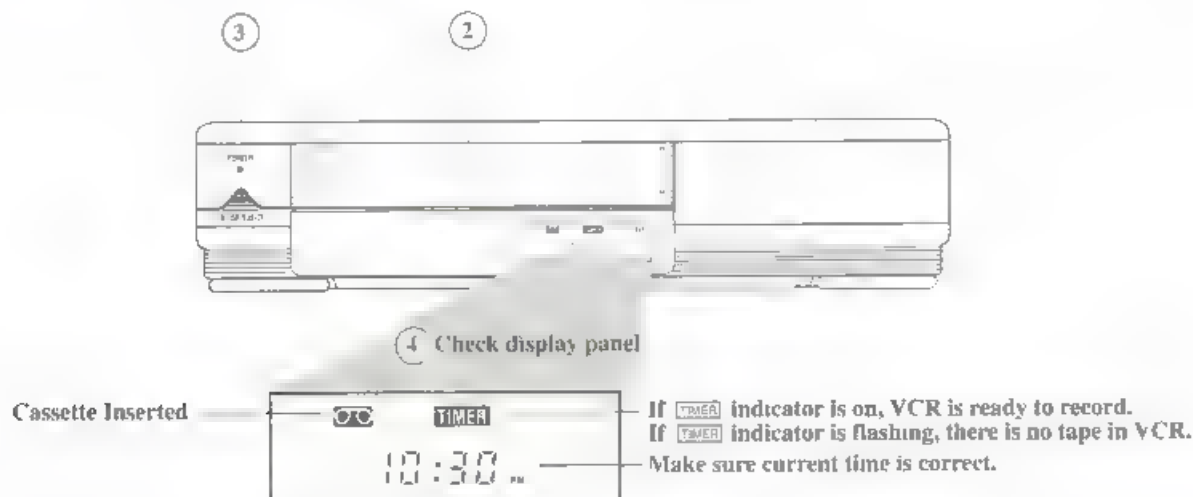
All programs are erased if power is interrupted.

Timer Recording

The information on this page tells you how to set up your VCR for timer recording after you have programmed the timer. *The programming instructions are on pages 24-25 and 26-27.* When you have finished programming the timer, follow the steps below for timer recording

We suggest that you make one or more short timer recordings for practice.

If you have a daily or weekly program in the VCR timer, you should check the steps below before the recording time is to start to make sure that your VCR is ready to record.



- ① Program the timer. *See pages 24-25 and 26-27.*
- ② Insert a cassette with the record-protect (safety) tab intact. Rewind if necessary

Timer Recording Checklist

The checklist below is provided for your use when making timer recordings on the VCR

- ☐ Cassette inserted in the VCR
- ☐ Cassette has its record-protect (safety) tab intact. If not, the cassette is ejected. *See "Erase Protection" on page 16.*
- ☐ Cassette length and recording speed are adequate for program(s) to be recorded
- ☐ Cassette rewound to beginning or to desired place on tape.
- ☐ Clock set to correct time and date.
- ☐ Timer has been programmed *as described on pages 24-25 and 26-27*
- ☐ VCR has been turned off. The **TIMER** indicator appears only if the timer is programmed and the VCR is off

Timer and Express (XPR) Recording

The timer cannot begin recording if the VCR is already recording with XPR. You can use XPR along with timer recording, but be careful that the programming times of the XPR and timer recordings do not overlap. If this should happen, the XPR will take priority.

TV Viewing During a Timer Recording

When the VCR turns on automatically to make a timer recording, it does not disturb whatever program you may be watching at the time. If you want to monitor the recording, press the **TV/VCR** button to turn on the **VCR** indicator and tune your TV to the

- ③ Turn Off the VCR.
- ④ Check the VCR's display panel.

Stopping a Timer Recording in Progress

To stop a recording in progress with the VCR:

Press the **POWER** button, and then press the **STOP/EJECT** button within 10 seconds

To stop a recording in progress with the remote control:

Press the **VCR 1** button and then press the **STOP** button within 10 seconds.

Note: If you have set your VCR to respond to the **VCR 2** button, press the **VCR 2** button instead of the **VCR 1** button

This erases a normal program from the timer's memory, but a daily or weekly program will record on the next scheduled day.

Timer Recording From the VCR's Line Input (AUDIO and VIDEO IN Jacks)

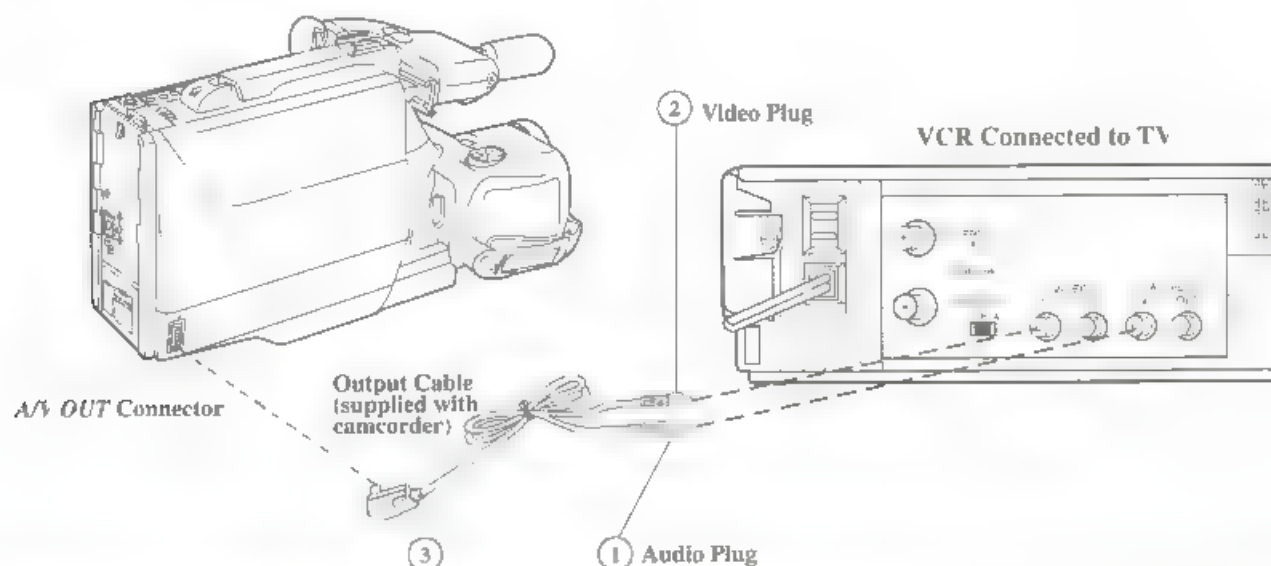
It is also possible to timer record from the VCR's line input (**AUDIO** and **VIDEO IN** jacks). To enter the channel for the timer recording, press the **INPUT** button on the remote control. **VIDEO** appears in the on-screen display instead of a channel number. This is convenient if you have a satellite receiver or similar device attached to the **AUDIO** and **VIDEO IN** jacks on the back of the VCR

Recording From a Camcorder

To duplicate tapes using your camcorder, connect your camcorder to the VCR as shown below. You will need an output cable (usually supplied with the camcorder).

- 1 Connect the audio plug from the output cable to the **AUDIO IN** jack on the back of the VCR
- 2 Connect the video plug to the **VIDEO IN** jack on the back of the VCR
- 3 Connect the other end of the output cable to the **AUDIO/VIDEO OUT** connector on the camcorder

Caution: The unauthorized recording of television programs and other material may infringe the rights of others.



Simplified Operating Instructions

- 1 Connect the camcorder to the VCR as shown above
 - 2 Turn on the TV and tune it to the "VCR channel" (3, 4, or video input).
 - 3 Turn on the camcorder and VCR
 - 4 Insert the recorded cassette that you want to duplicate in the camcorder.
 - 5 Insert a blank cassette with its record-protect (safety) tab intact into the VCR
 - 6 Make sure the **VCR** indicator appears in the VCR's display panel. If not, press the **TV/VCR** button to turn it on
 - 7 Make sure the line indicator (**L**) appears in the VCR's display panel. Press the **INPUT** button on the remote control to turn it on
 - 8 Select the tape recording speed (**SP**, **LP**, or **SLP**) by pressing the tape **SPEED** button on the remote control
 - 9 Rewind the cassettes if necessary
 - 10 Press the **RECORD** and **PLAY/X2** button **at the same time** on the VCR (or the **RECORD** button on the VCR's remote control)
 - 11 Place the camcorder in the playback mode and press the camcorder's **PLAY** button.
 - 12 Adjust the tracking control on the camcorder, if necessary
Note: If the cassette was not recorded on the camcorder, horizontal streaks may appear in the picture. Adjust the camcorder's tracking to remove the streaks.
 - 13 If you want to edit out any of the material, press the **PAUSE** button on the VCR (or VCR's remote control) Press the **PAUSE** button again to resume recording
Note: Use **PAUSE** only for pauses less than three or four minutes. Press the **STOP/EJECT** button on the VCR (or the **STOP** button on the VCR's remote control) for longer pauses. Press the **RECORD** and **PLAY/X2** buttons at the same time on the VCR (or the **RECORD** button on the remote control) to resume recording.
 - 14 Stop the camcorder and VCR when you are finished
- Note:** The TV does not have to be on to copy tapes. If you want to watch another TV channel, press the **TV/VCR** button to turn off the VCR indicator. Then select the channel you want to watch with the TV's channel buttons.
- Remember:** Turn off the line indicator (**L**) in the VCR's display panel for normal recording from the VCR's tuner

Recording from Another VCR

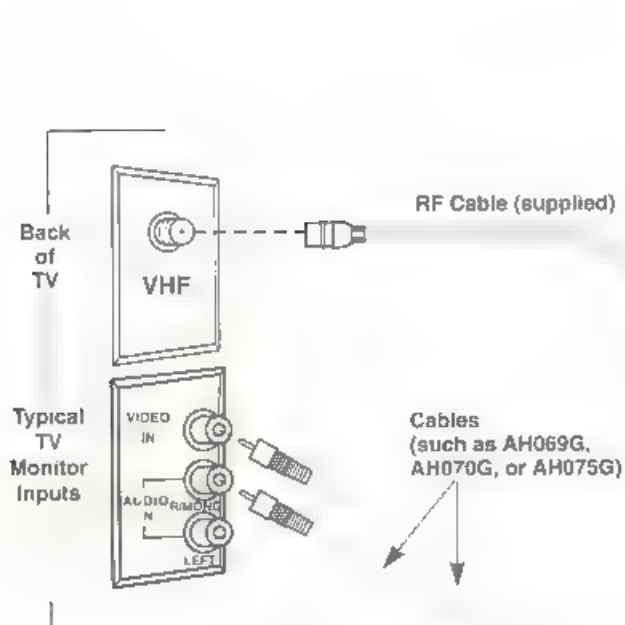
To copy your home videos from one VCR to another, use one VCR as the playback VCR and another VCR as the recording VCR.

Connecting the VCR's

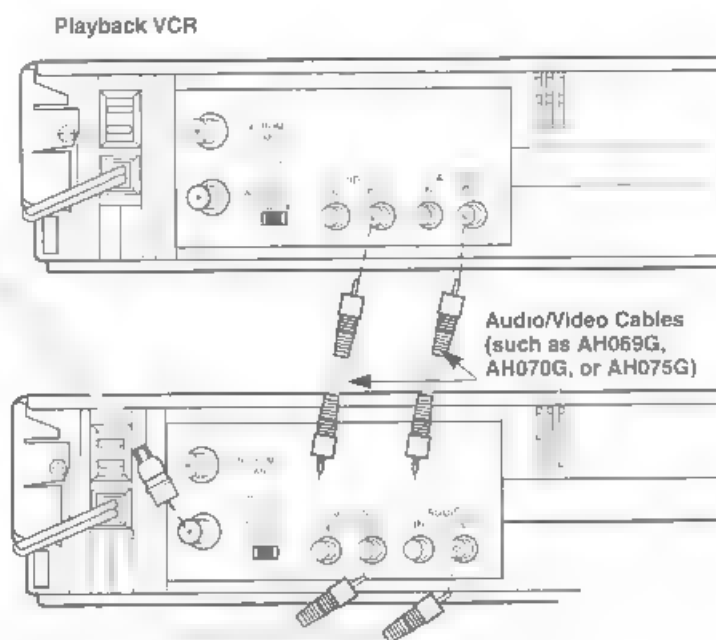
1. Connect a shielded audio/video cable (such as AH069G, AH070G, or AH075G) from the **VIDEO OUT** jack on the playback VCR to the **VIDEO IN** jack on the recording VCR.
2. Connect another cable from the **AUDIO OUT** jack on the playback VCR to the **AUDIO IN** jack on the recording VCR.

Important Note: Be sure that the recording VCR is connected to the TV so that you can see what is being recorded. This can be done either by connecting the **VIDEO** and **AUDIO OUT** jacks of the recording VCR to the **VIDEO** and **AUDIO IN** jacks of the TV or by connecting the **OUT TO TV** jack on the recording VCR to the **VHF IN** jack on the TV.

Caution: The unauthorized recording of television programs and other materials may infringe the rights of others.



If you have a TV monitor/receiver with audio and video inputs, you can also connect these jacks to produce a slightly better picture during playback.



Copying Your Home Video

1. Turn on the TV and VCR's. Tune the TV to the "VCR Channel" (3, 4, or video input).
2. Press the **INPUT** button on the remote control to turn on the line indicator (L) in the recording VCR's display panel.
3. Insert the home video that you want to copy into the playback VCR. Insert a blank tape into the recording VCR.
4. Press the **PLAY/X2** button on the playback VCR to play the tape. Press the **PAUSE** button on the playback VCR when you reach the point where you want to begin copying.
Note: If the tape was not recorded on the playback VCR, horizontal streaks may appear in the picture. Press the **TRACKING/V-LOCK** up or down button on the playback VCR's remote control to remove the streaks.
5. Press the **RECORD** and **PLAY/X2** buttons at the same time on the recording VCR, and then press the **PAUSE** button to place the recording VCR in the record-pause mode.
6. Press the **PAUSE** buttons on both VCR's at the same time to begin copying the tape.
Note: You can edit out segments that you do not want to copy by pressing the **PAUSE** button on the recording VCR at any time to stop copying the tape. Locate the next segment you want to copy on the playback VCR by using the **FFWD**, **REWIND**, and **PLAY/X2** buttons. Then place the playback VCR in the play-pause mode by pressing its **PAUSE** button. Press the **PAUSE** buttons at the same time on both VCR's to resume copying.
7. Press the **STOP/EJECT** buttons on both VCR's when you are finished.

Remember: Turn off the line indicator (L) in the VCR's display pane, for normal recording from the VCR's tuner.

Copying Tapes Using Dual Remote with AutoEdit™

Use your new VR512A VCR as the recording VCR and set it to respond to the **VCR 2** button on the remote control as described on page 15. Use your compatible RCA VCR as the playback VCR. This VCR will respond to the **VCR 1** button on the remote control.

- 1 Connect your VCR's as shown on the previous page
- 2 Turn on the VCR's and TV. Tune the TV to the "VCR channel" (3, 4, or video input).
Note: If you are using channel 3 or 4 on your TV to watch the VCR, be sure the **VCR** indicator in the recording VCR's display panel is on. Press the **TV/VCR** button to turn it on.
- 3 Press the **INPUT** button on the remote control to turn on the line indicator (L) in the recording VCR's display panel
- 4 Insert the previously recorded home video that you want to copy into the playback VCR. Insert a blank tape into the recording VCR
- 5 Press the **VCR 1** button on the remote control to control the playback VCR. Then use the **PLAY**, **FFWD**, and **REWIND** buttons to locate the point where you want to begin copying. Press the **PAUSE** button while the VCR is playing. This puts the playback VCR in the play-pause mode.
- 6 Press the **VCR 2** button on the remote control to control the recording VCR. Press the **RECORD** button on the remote control and then press the **PAUSE** button to put the recording VCR in the record pause mode.

- 7 Press the **AUTO EDIT** button on the remote control. The VCR's will start copying the tape
- 8 Press the **AUTO EDIT** button again when you want to stop the tape from copying
- 9 Press **VCR 1** to control the playback VCR. Use the **FFWD**, **REWIND**, and **PLAY** buttons to find the next segment of the tape you want to copy. Press the **PAUSE** button while the VCR is playing to put the playback VCR in the play-pause mode.
- 10 Press the **AUTO EDIT** button to start copying the tape again. Press the **AUTO EDIT** button again to stop the tape from copying.
- 11 Press **VCR 1, STOP**, then **VCR 2, STOP**, when you are finished.

Notes: The TV does not have to be turned on to copy a tape. You may turn off the TV after the recording has started.

To watch another TV channel on the TV while you are copying the tape, first press the **TV/VCR** button to turn off the **VCR** indicator in the recording VCR's display panel. Then use the TV's channel selector to select the channel you want to watch on the TV.

Remember to press the **INPUT** button on the remote control to turn off the line indicator (L) in the recording VCR's display panel when you are finished.

Compatible TV's and VCR's

The remote control that came with your VCR is capable of individually operating two compatible RCA VCR's. You can record with one VCR while you are playing back a tape on the other VCR and control each VCR individually with the same remote.

The VR512A VCR can be set to respond to either the **VCR 1** or **VCR 2** button on the remote control as described on page 15. If you have a compatible RCA VCR, and you plan to use both in the same room, set your VR512A to respond to the **VCR 2** button on the remote control. The other VCR will probably respond to the **VCR 1** button.

TV Compatibility

The remote control that came packed with your VR512A is also capable of operating most basic functions of many RCA TV's. If your RCA TV came with a remote control that has VCR controls on it, it is compatible. To test compatibility of other RCA TV's, point the VCR's remote control at the TV and press the **TV** button. If the TV turns on, it is compatible.

The VR512A's remote control will also control ProScan and a limited number of recent GE TV's. Point the remote at the TV and press the **TV** button. If the TV turns on, it is compatible.

Dual VCR Remote Compatible VCR's

Model Prefix	Compatible Models
VRxxx	All models with infrared remote (unless otherwise noted in model's instruction book)
VPTxxx	All models with infrared remote (except VPT200, VPT250)
VLTxxx	All models with infrared remote (except VLT260, VLT270)
VLPxxx	All models with infrared remote
VKTxxx	VKT385, 400, 425, 426, 500, 650, 700
VKPxxx	VKP900, 925, 926, 950
VJTxxx	VJT500, 700
VJPxxx	VJP825, 900

Notes: If your older VCR (listed in the chart) has a **NORM/UNIFIED** switch, you must place it in the **UNIFIED** position for the VCR to respond to the **VCR 1** button.

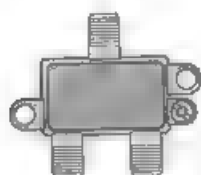
The **VCR 1** button will also control a limited number of recent GE VCR's. Point the remote at the VCR, and press the **VCR 1** button. If the VCR turns on, it is compatible.

Optional Accessories

Several accessories are available that will enable you to expand your home video system. You may also find some of these items helpful when installing your VCR.

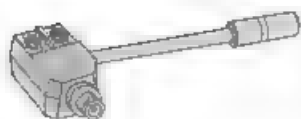
Accessories are available from most RCA dealers and electronics supply stores. You can also order accessories direct by mail with the order form or by calling our toll-free accessory number 1-800-338-0376.

Splitters/Combiners



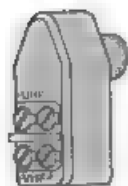
AH047

2-Set Splitter/Combiner is used as a splitter to divide a signal so that it may be fed to two separate devices. For example, splitting a single antenna lead-in signal to feed two TV's (or one TV and one VCR). It can also be used as a combiner to combine two signals into a single output signal.



197551

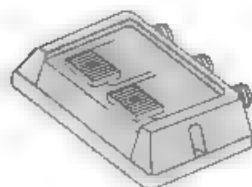
Antenna Mixer is used to combine a flat 300-ohm twin-lead UHF antenna cable and a round 75-ohm VHF antenna cable for connection to a single antenna input.



193984

Antenna Mixer is used to combine two VHF and UHF flat 300-ohm twin-lead antenna cables for connection to a single antenna input.

A-B Switch



AH041

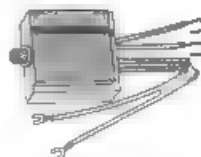
Deluxe A-B Switch lets you send a signal to one of two separate devices (such as a cable-TV signal to a VCR or TV). All three connectors are on the same side, and push-buttons are used to select the signal.

Band Separators



AH050

75-to-75/300 Band Separator is used to connect an antenna cable from a VCR to a TV that has a round VHF jack and UHF screw terminals.



AH015

75-to-300/300 Band Separator is used to connect an antenna cable from a VCR to a TV that has screw terminals for VHF and UHF.

Cable Transformers



193983

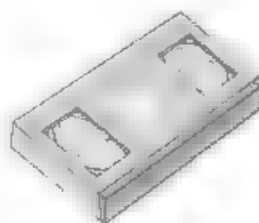
300-to-75 Transformer is used to connect a standard (300-ohm) antenna twin-lead to a standard round 75-ohm connector on a VCR or TV.



AH011

75-to-300 Transformer is used to connect a standard round 75-ohm antenna cable to the 300-ohm screw terminals on a TV.

Head-Cleaning Kit



AV009W

VCR Head-Cleaning Kit uses a special wet-system cleaning cassette which you insert in the VCR just as you would a standard tape cassette. The cleaner removes 90-100% of dirt, dust, and oxide residue from heads and head wheel, pinch rollers, and capstans. The kit includes special cassette, cleaner fluid, and instructions. Be sure to follow the instructions carefully.

Cleaner/Polisher Solution



AH035

Cleaner/Polisher can be used to clean the outside of your VCR. This non-abrasive, anti-static solution can be used on any hard, non-absorbent surface such as plastic, glass, mirrors, and chromed parts. Also cleans and polishes TV screens and plastic cabinets.

Accessory descriptions, features, and availability are subject to change without notice.

Optional Accessories (continued)

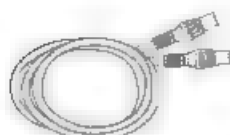
The following cables are available from most dealers and electronics supply stores in case you want to position your components farther apart or need additional cables.

Antenna Cables



AH037 (3-ft.)

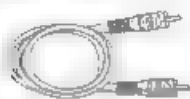
Screw-on Cable attaches to the round antenna connectors (called 75-ohm F-type) on the back of your VCR or TV. The ends screw onto the connectors for a secure connection.



AH065G (6-ft.)
AH066G (10-ft.)

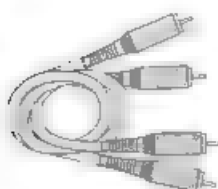
Push-on Cable attaches to the round antenna connectors (called 75-ohm F-type) on the back of your VCR or TV. The ends push on for a quick connection.

Audio/Video Cables



AH069G (3-ft.)
AH070G (5-ft.)

Audio/Video Cable is shielded for connecting **AUDIO** and **VIDEO** jacks. Has an RCA-type phono plug on each end.



AH075G (6-ft.)

Monaural VCR Dubbing Cable is a double cable that lets you connect the **VIDEO** and **AUDIO** jacks of two VHS VCR's to duplicate tapes. It can also be used to connect a VCR to your monitor TV. The cable is color-coded and shielded with RCA-type phono plugs on each end.

Remote Controls



210843

Remote Control (210843) is the remote control that came packed with your VCR. You can use the order form to order it direct by mail.



RCU 100

Remote Control (RCU 100) is an optional remote control that can be programmed to control most brands of remote controllable TV's, VCR's and cable boxes.

Accessory Order Form

Order Form for VCR Model VR512A

Description	Part No.	Price	Qty.	Total
75-to-300 Transformer	AH011	\$ 1.90		
75 to 300/300 Band Separator	AH015	\$ 4.55		
Cleaner/Polisher Solution	AH035	\$ 6.95		
Screw-on Antenna Cable (3-ft.)	AH037	\$ 3.95		
A/B Switch	AH041	\$14.95		
2-Set Splitter/Combiner	AH047	\$ 3.99		
75-to 75/300 Band Separator	AH050	\$ 5.95		
Gold-Tipped Antenna Cable (6-ft.)	AH065G	\$ 6.99		
Gold-Tipped Antenna Cable (10-ft.)	AH066G	\$ 8.99		
Gold-Tipped Audio/Video Cable (3-ft.)	AH069G	\$ 5.99		
Gold-Tipped Audio/Video Cable (5-ft.)	AH070G	\$ 7.99		
Gold-Tipped Dubbing Cable (6-ft.)	AH075G	\$10.99		
VCR Head Cleaner Kit	AV009W	\$14.95		
Optional RCA Remote Control	RCU100	\$49.95		
300-to-75 Transformer	193983	\$ 6.95		
Antenna Mixer	193984	\$10.73		
Antenna Mixer	197551	\$11.40		
Replacement Remote Control	210843	\$89.95		

Prices are subject to change without notice.

Total Merchandise (\$10 Minimum Order) . . . \$

Sales Tax . . . \$

We are required by law to collect the appropriate sales tax for each individual state, county, and locality to which the merchandise is being sent.

Shipping, Handling, and Insurance . . . \$ 5.00

Total Amount Enclosed . . . \$

Use VISA or MasterCard preferably. Money order or check must be in U.S. currency only. No C.O.D. or CASH.

- All accessories are subject to availability.
- Where applicable, we will ship a superseding model.

Detach Here



Please complete other side also

Accessory Order Form (continued)

Charge your order on your VISA
or MasterCard by
filling in below

USE YOUR CREDIT CARD

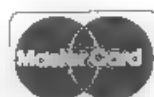
IMPORTANT: Copy complete account number from your VISA card



--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

My card expires:

IMPORTANT: Copy complete account number from your MasterCard



--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Copy Number
above your
name on
MasterCard

--	--	--	--

My card
#XPIRES.

--	--	--	--

AUTHORIZED SIGNATURE

Prices are subject to change without notice.

PLEASE

Print or type your name and address clearly. This will be your mailing label.

A complete and correct order will
save you days of waiting

Name: _____

Street: _____

_____ Apt. _____

City _____

State: _____ Zip: _____

Please make sure that both sides of this form have been filled out completely

To order accessories, contact your local RCA Dealer.
If a dealer is not nearby, you can also follow the directions below to order by telephone or direct-by mail

United States Orders

To place your order by phone, have your Visa or MasterCard ready and call the toll-free number listed below between 8AM and 8PM Eastern Standard Time. Use this number only to place an order for accessory items listed on this order form.

1 - 800 - 338 - 0376

Most times your order will be shipped UPS within 72 hours of receipt. If ever it is not possible to ship within 30 days, we will notify you with an update on your order and an option to cancel.

To place your order by mail, detach and mail the completed order form with credit card information, money order, or check in U.S. currency (made payable to Thomson Consumer Electronics, Inc.) to the following address:

RCA Video Accessories
PO Box 8419
Rocks, PA 17573

For more information on these accessories (or current prices), write to the following address:

Video Accessories Customer Service
Thomson Consumer Electronics, Inc.
Distributor & Special Products
2000 Clements Bridge Rd
Deptford, NJ 08096-2088

Canadian Orders

For Canada inquiries, please call one of these toll-free numbers for information about accessories

English: 1-800-668-5518
French: 1-800-668-5507

International Orders

This offer is valid only in the 50 United States. For international orders, please send your request for a price quotation (not an order) to:

International Customer Service
Thomson Consumer Electronics, Inc.
Distributor & Special Products
2000 Clements Bridge Rd
Deptford, NJ USA 08096-2088

✂ Detach Here

General Installation Information

Choosing a Location for Your VCR

- Choose a location that is convenient, but away from sources of heat such as direct sunlight and heating units
- If the VCR is to be installed in an equipment rack or cabinet with other components, be sure that there is adequate ventilation at the back and around the sides of the components. The VCR should not be placed on or directly above a stereo amplifier because of the heat that rises from the amplifier
- Choose a flat surface at least as large as the VCR so that it rests on its mounting feet. It is important that air can pass through the ventilation holes in the bottom of the unit to prevent it from overheating. Do not operate the VCR on a rug or carpet because the pile will obstruct these holes.

Some TV sets may cause interference in home VCR's. To avoid interference and get the best performance from your VCR, follow these guidelines

- When placing the VCR under a TV, keep at least 18 inches between the bottom of the TV and the top of the VCR.
- If interference is present when the VCR is used on top of the TV or at the 18-inch distance below the set, move the VCR to a position beside the TV
- If moving the VCR does not solve the interference problem, try plugging the VCR into a different wall socket.
- If interference continues after all the above, call your dealer or service representative

You may find the following booklet prepared by the Federal Communications Commission helpful

Interference Handbook

This booklet is available from the Superintendent of Documents, U. S. Government Printing Office, Washington, DC 20402

What Are VHF and UHF?

When television broadcasting began, the Federal Communications Commission (FCC) assigned twelve VHF (very high frequency) channels and numbered them 2 through 13

Later, as television broadcasting expanded, the FCC assigned UHF (ultra high frequency) channels



Your home antenna is a "signal receiver" that picks up TV broadcasts out of the air. There are several different types of antennas

- Some receive only VHF channels
- Some receive only UHF channels.
- Some receive both VHF and UHF channels.

Depending on the type of antenna, signals from the antenna can be conducted through either flat "twin-lead" cable or through round "coaxial" cable as shown below

Types of Antenna Cables



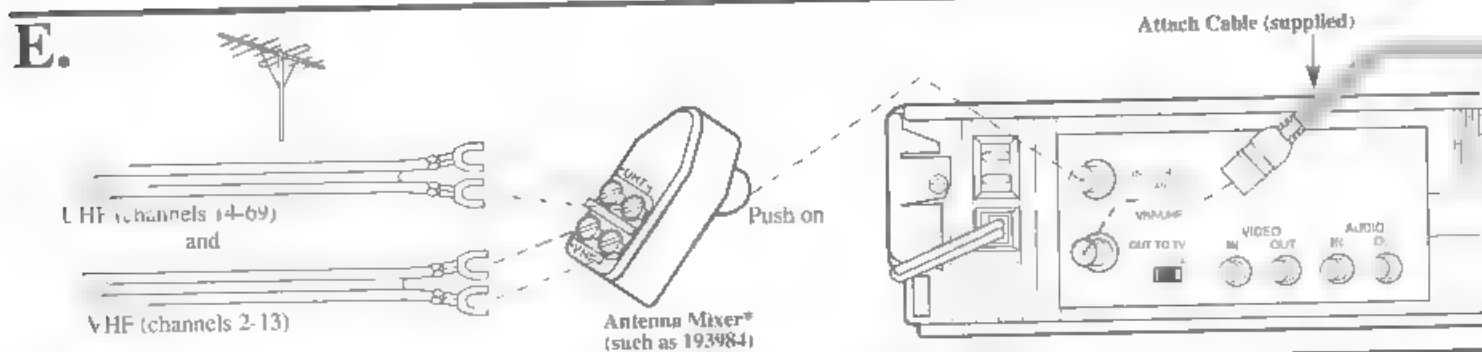
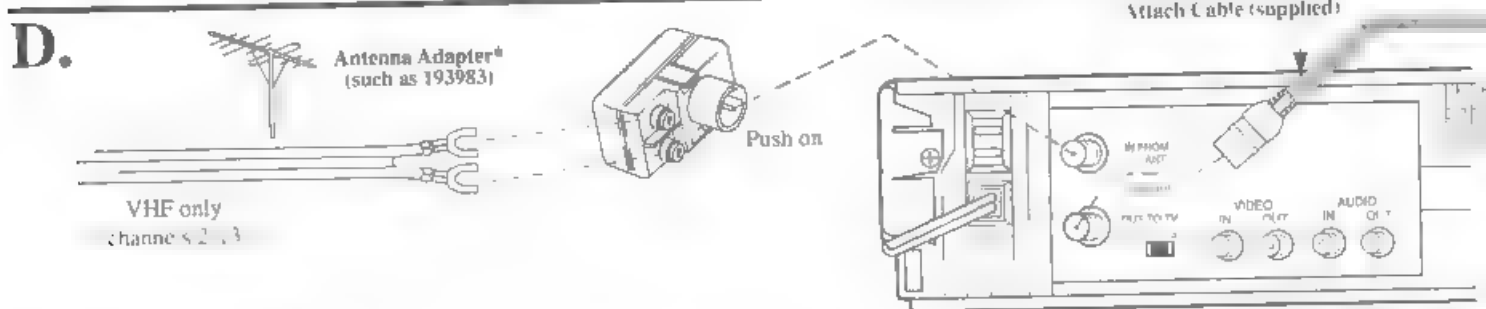
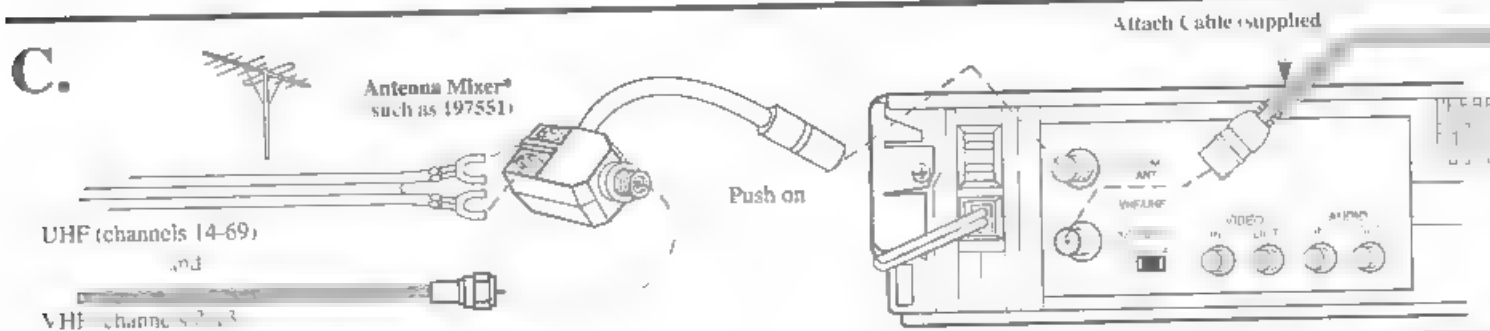
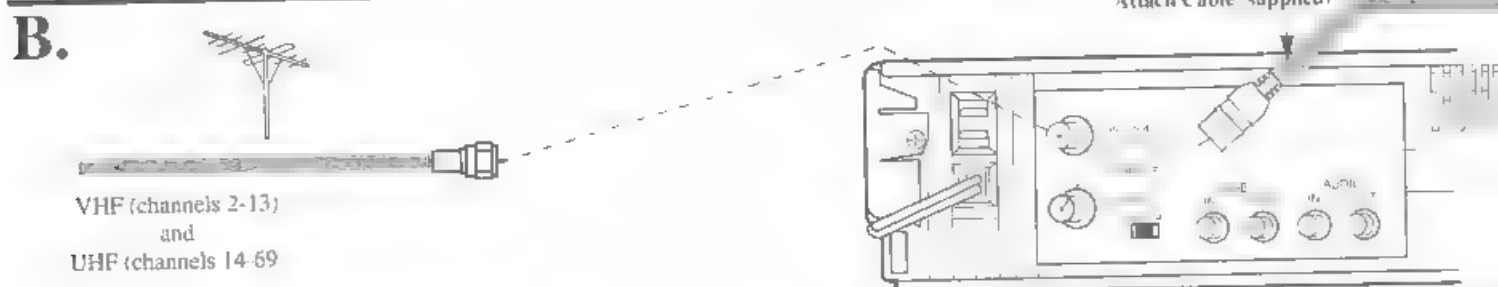
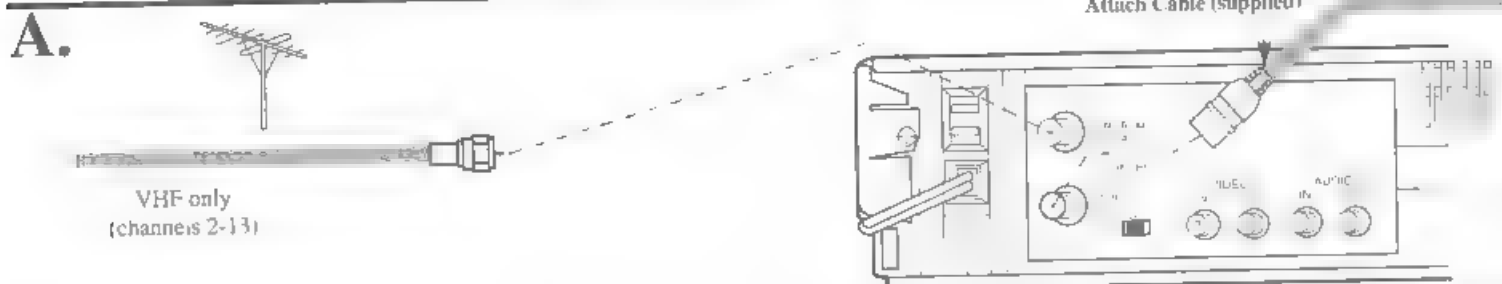
Cable-TV (CATV) supplies television signals directly by round cable without the need for a home antenna. Cable-TV can deliver both VHF and/or UHF channels and programs not available from a home antenna. You will usually get better picture quality (for recording TV programs) if you connect an outdoor antenna or cable-TV system to your VCR. If this is not possible (or if you are in an area with good signal reception), use a good quality indoor antenna.

- Details for connecting a home antenna system are on pages 36-37
- Details for connecting a cable-TV system are on pages 38-41
- Details for connecting a TV monitor with AUDIO and VIDEO IN jacks are on page 42

Antenna Connections (Step 1)

1. Disconnect Existing Antenna from TV and Connect it to the VCR.

(Your antenna connections will probably resemble those in one of the diagrams on this page.)

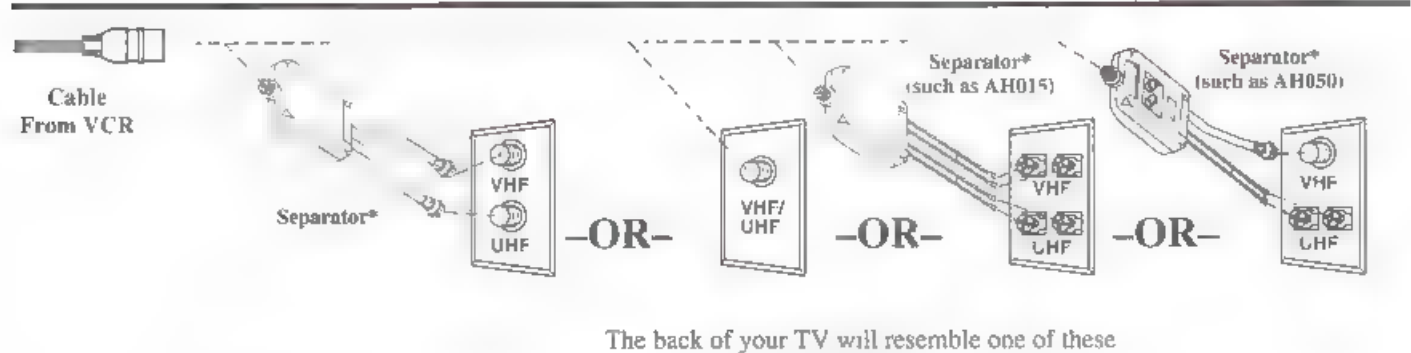
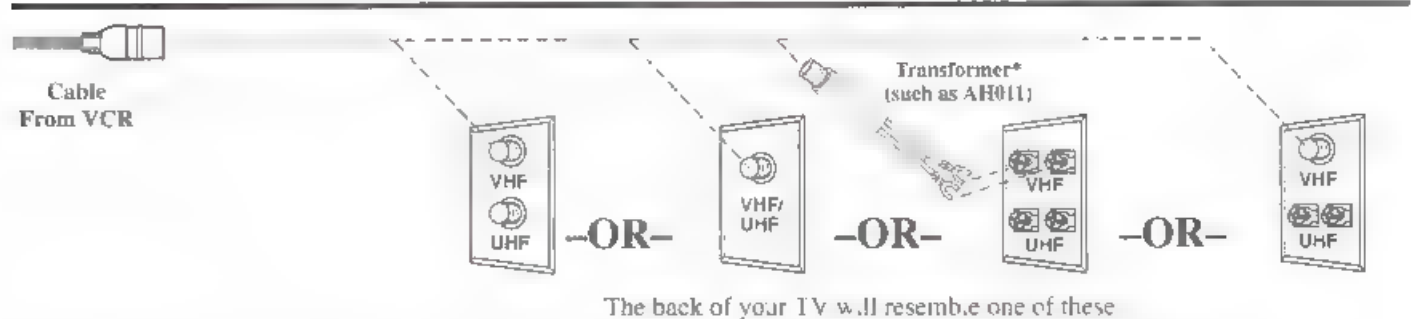
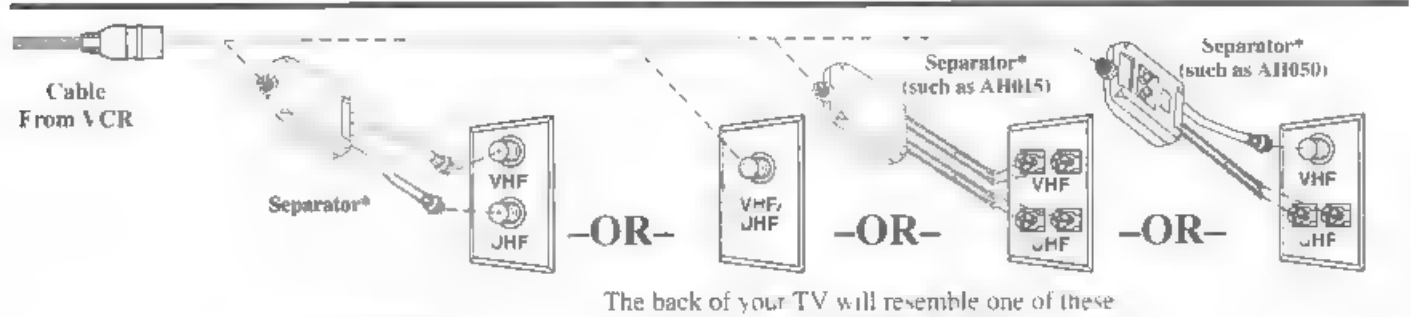
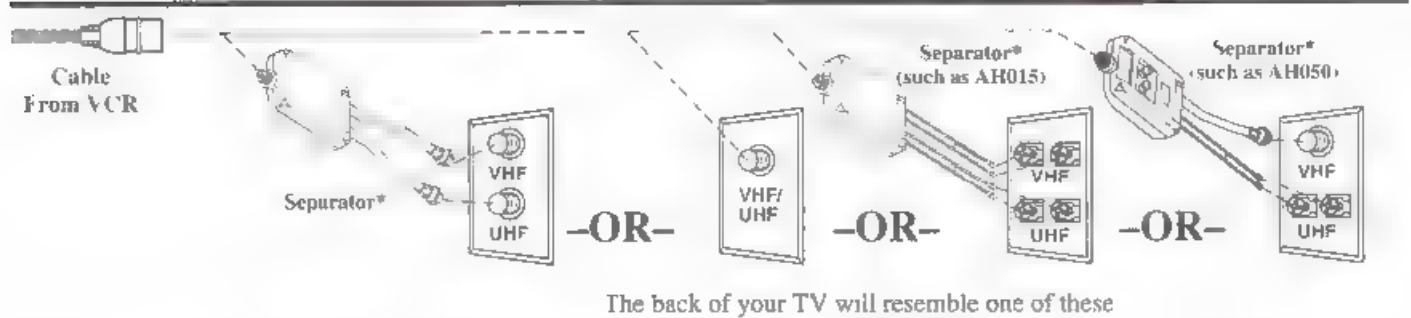
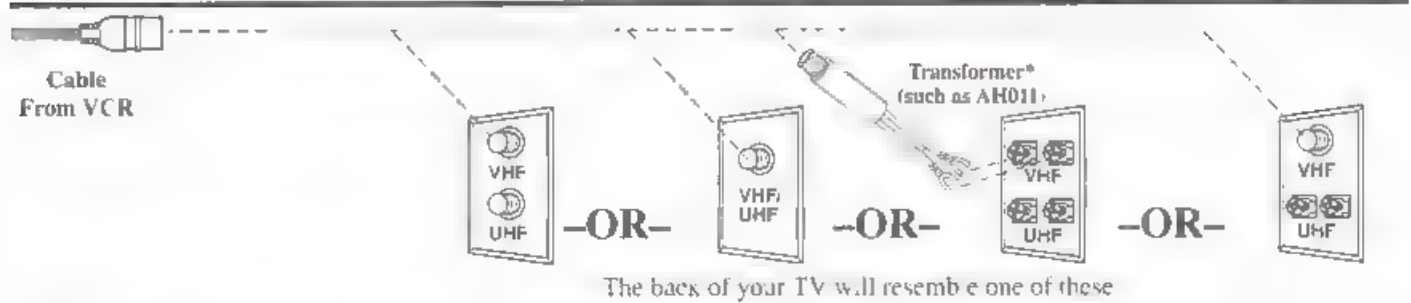


*Optional accessory available from most dealers or electronics supply stores. Manufacturer's name on box.

Antenna Connections (Step 2)

2. Connect the VCR to the back of the TV.

(The antenna connections on the back of your TV will probably resemble those in one of the diagrams below.)



*Optional accessory available from most dealers or electronics supply stores. Mail order form is on page 33

Cable-TV Connections

Your VCR is capable of receiving up to 181 channels including up to 125 unscrambled cable channels. Local cable systems may vary, so check your cable company's compatibility requirements. The chart below lists the channels your VCR is capable of receiving.

Channels	Off-Air	Cable	Total
• VHF Channels 2-13	12*	12*	12*
• UHF Channels 14-69	56	-	56
• Midband Channels 14-22 (A-I)	-	9	9
• Superband Channels 23-36 (J-W)	-	14	14
• Hyperband Channels 37-64 or (W + 1 to W + 28)	-	28	28
• Ultraband Channels 65-94 and 100-125 (W + 29 to W + 84)	-	56	56
• Channels 98-99 (A-2, A-1)	-	2	2
• Channels 95-97 (A-5, A-4, A-3)**	-	3**	3**
• Channel 01 (A-8)	-	1	1
Total*	68	125	181

* VHF channels are only counted once in the total channel count because you can receive channels 2-13 on both off-air and cable channels. Therefore the total channel count for off-air and cable is 181 channels (68 + 125 - 12 = 181).

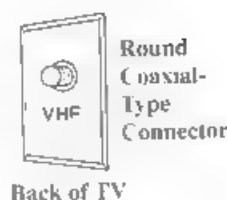
**These channels are not applicable in Canada.

Use the selection chart below to determine which one of the following cable-TV connection diagrams (A-D) you should use.

If Your TV Is:	And Your Cable-TV System Has:	Then Use Diagram(s):
cable compatible (see below)	no channels scrambled	A
	some channels scrambled	B, C, or D
not cable compatible (see below)	no channels scrambled	B or D
	some channels scrambled	B or D

Cable Compatible TV's

Cable compatible TV sets have an extended tuning range and can tune "unscrambled" cable channels without using a cable company converter box. You can connect the cable directly to your TV without going through a cable converter box.

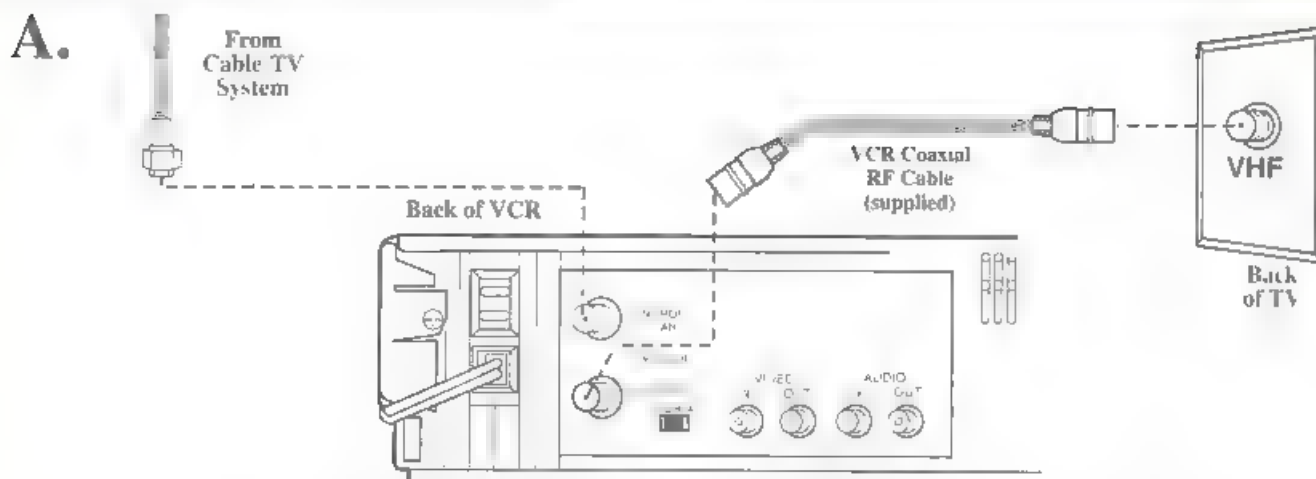


Not Cable Compatible TV's

Most sets made before 1978 were "not cable compatible". These sets are not capable of tuning in "unscrambled" cable channels without a cable company converter box (supplied by the cable company). One way to determine if your TV is "not cable compatible" is to refer to the TV owner's manual and see if there is any reference to your TV being able to tune cable channels. If you have only VHF and UHF screw terminals for antenna connections and do not have a round, coaxial-type cable connector, then your TV is probably not cable compatible.

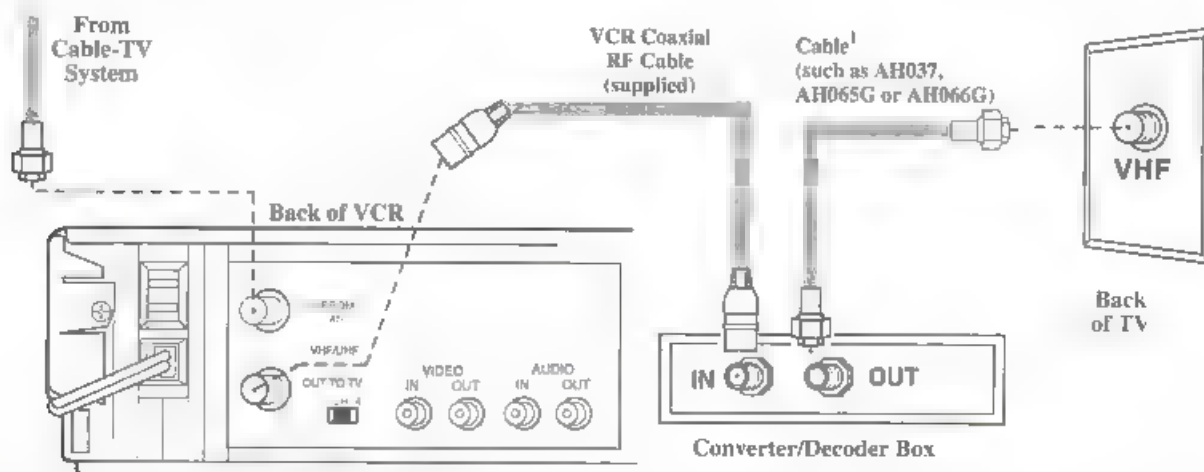


Cable-TV Connections (continued)



- When the VCR is on (and its *VCR* indicator is turned on)², remember to tune your TV to the output channel of the VCR (3 or 4)—the same channel you selected with the *3CH 4* switch on the back of the VCR³. You can then select channels with the *CHANNEL* buttons on the VCR (or VCR's remote control)
- When the VCR is off (or its *VCR* indicator is turned off)², your TV does not have to be tuned to channel 3 or 4. You can select channels with the *CHANNEL* buttons on the TV (like you did before you connected the VCR)

B. The VCR will not be able to record scrambled channels with this hookup. To record scrambled channels, refer to diagram C. This hookup lets you use the VCR's remote control to select unscrambled channels.



- Remember to always keep your TV tuned to the output channel of the converter box (usually 2, 3, or 4)
- When the VCR is on (and its *VCR* indicator is turned on)², remember to tune the converter box to the output channel of the VCR (3 or 4)—the same channel you selected with the *3CH 4* switch on the back of the VCR³
- When the VCR is off (or its *VCR* indicator is turned off)², your converter box does not have to be tuned to channel 3 or 4. You can select channels with the channel selector on the converter box (like you did before you connected the VCR). Remember to keep your TV tuned to the output channel of the converter box (usually channel 2, 3, or 4).

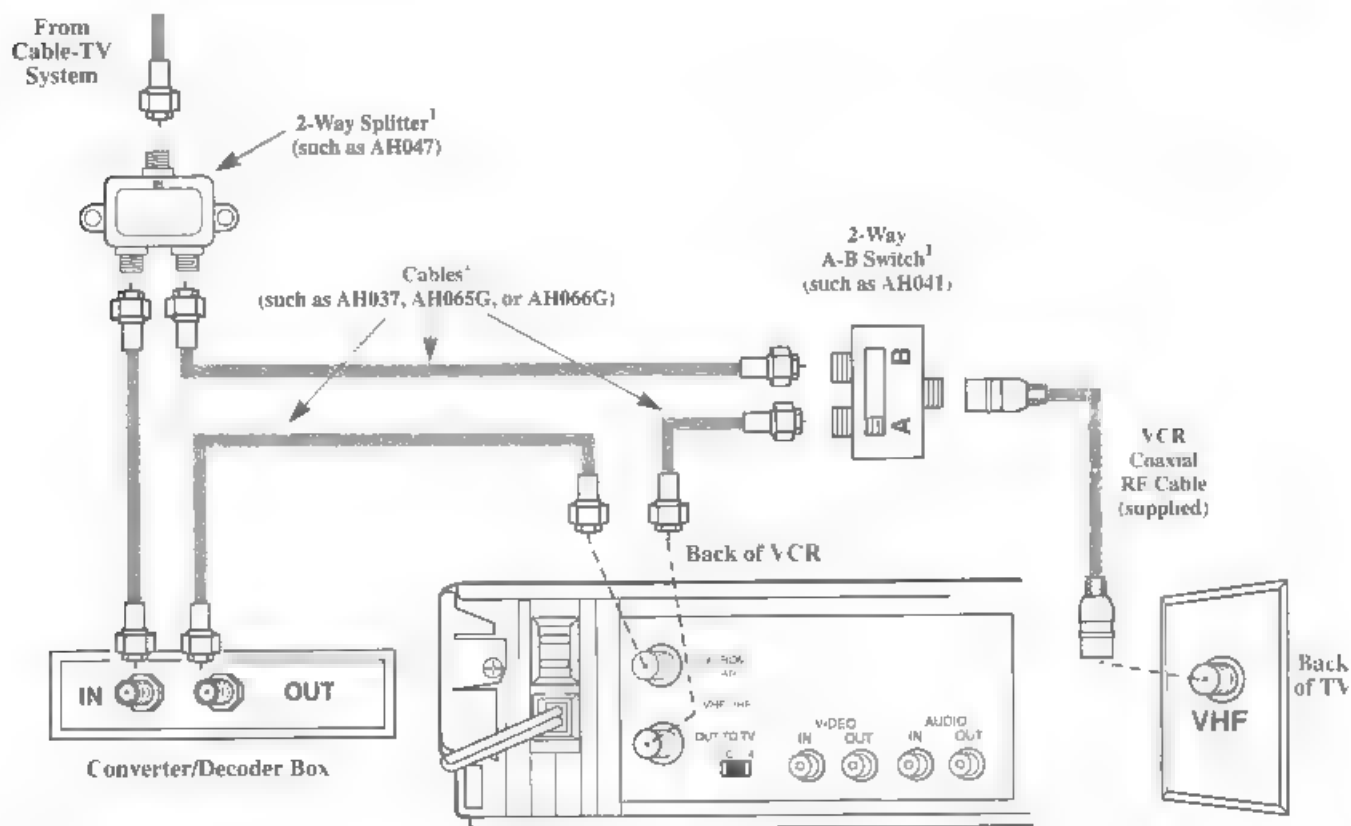
¹ Optional accessory available from most dealers or electronics supply stores. Mail order form is on page 33.

² To turn the *VCR* indicator on or off in the display panel, press the *TV/VCR* button. Detailed information is on page 3.

If you have connected a TV monitor as shown on page 42, tune your TV to a new input channel so you can see the signal coming into its *Audio* and *Video* in jacks.

Cable-TV Connections (continued)

- C.** These connections let you record any scrambled or unscrambled channel with the VCR while you watch another channel (unscrambled) on the TV.



Use "A" position of A-B switch for:

Playing Tapes in VCR.

Remember to tune your TV to the output channel of the VCR (3 or 4)—the same channel you selected with the *3CH 4* switch on the back of the VCR¹

Watching scrambled channels.

- If the VCR is turned off (or *VCR* indicator is turned off)², tune the TV to the output channel of the converter box (usually 2, 3, or 4)
- If the VCR is turned on (and its *VCR* indicator is turned on)², tune the VCR to the output channel of converter box (2, 3, or 4). Remember to also tune your TV to the output channel of the VCR (3 or 4)—the same channel you selected with the *3CH 4* switch on the back of the VCR³

Recording channels.

Select the desired channel with the converter box. Tune the VCR to the output channel of the converter box (2, 3, or 4).

If you want to watch the recording in process, tune your TV to the output channel of the VCR (3 or 4)—the same channel you selected with the *3CH 4* switch on the back of the VCR³. (Make sure the *VCR* indicator is turned on)²

Use "B" position of A-B switch for:

Watching unscrambled channels.

Select the channel you want to watch with the *CHANNEL* buttons on the TV. Your converter box and the VCR do not need to be turned on. This lets you use your TV's remote control to select unscrambled channels

Watching unscrambled channels while the VCR is recording a different channel.

After recording has started, put the A-B switch in the *B* position and select the channel you want to watch with the *CHANNEL* buttons on the TV

¹ Optional accessory available from most dealers or electronics supply stores. Mail order form is on page 33

² To turn the *VCR* indicator on or off in the display panel, press the *TV/VCR* button. Detailed information is on page 3.

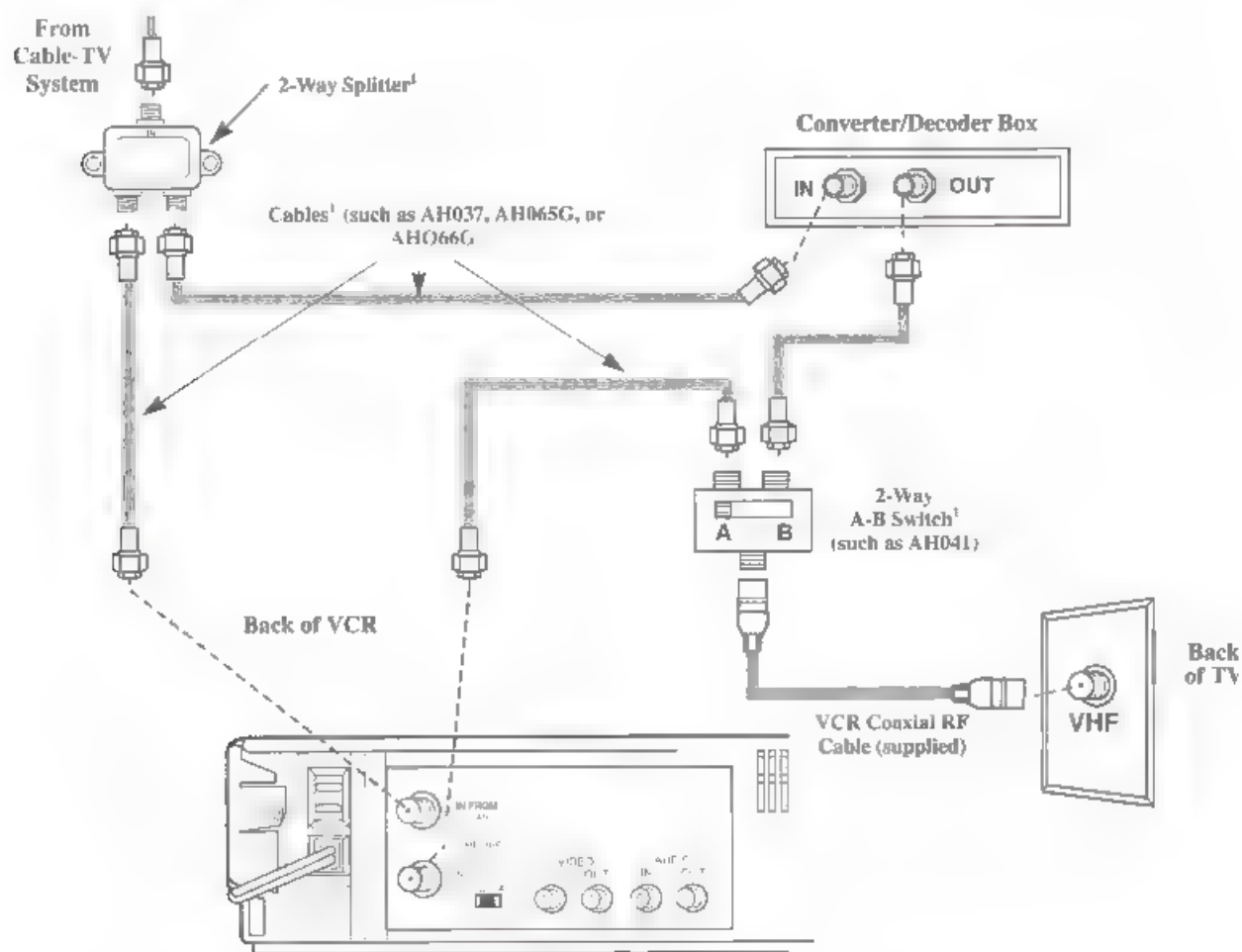
³ If you have connected a TV monitor as shown on page 42, tune your TV to its video input channel so you can see the signal coming into its *AUDIO* and *VIDEO IN* jacks

Cable-TV Connections (continued)

D. These connections let you record any unscrambled channel with the VCR while you watch another channel (scrambled or unscrambled) on the TV.

The A-B switch is used to select either the converter output or the VCR output. This lets you select unscrambled channels with the VCR (or the VCR's remote control)

Note: The VCR will not be able to record scrambled channels with this hookup because the converter box is not connected to the VCR. To record scrambled channels, use hookup C.



Use "A" position of A-B switch for:

Playing tapes in VCR.

Remember to tune your TV to the output channel of the VCR (3 or 4)—the same channel you selected with the **3CH 4** switch on the back of the VCR. (The **VCR** indicator must also be turned on.)²

Recording unscrambled channels with VCR

To watch the recording while it is in process, tune your TV to the output channel of the VCR (3 or 4)—the same channel you selected with the **3CH 4** switch on the back of the VCR.³ (The **VCR** indicator must also be turned on.)²

Use "B" position of A-B switch for:

Viewing any cable-TV channel when the VCR is turned off or recording another channel.

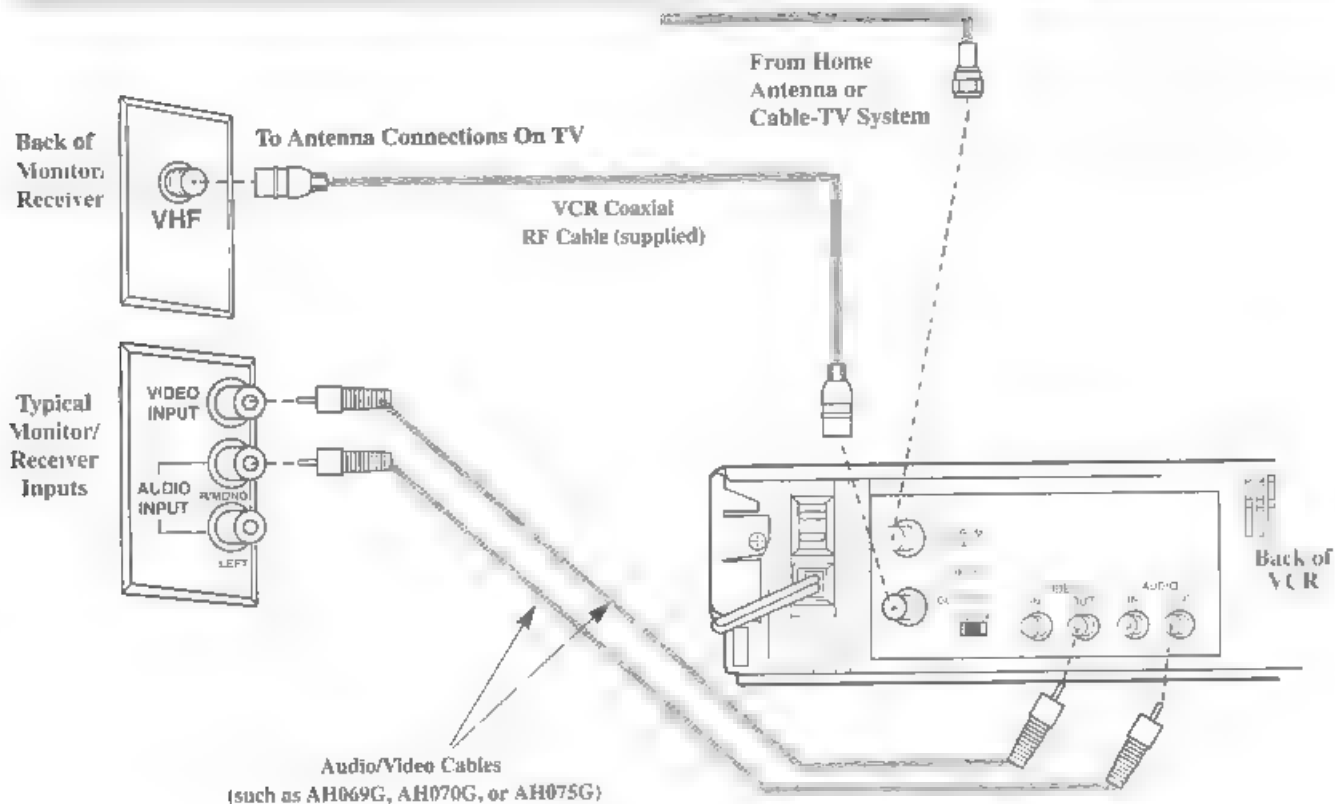
When the VCR is turned off or recording another channel, you can view any cable-TV channel (scrambled or unscrambled). Remember to tune your TV to the output channel of the converter box (usually 2, 3, or 4) and select the channel with the **CHANNEL** selector on the converter box.

¹ Optional accessory available from most dealers or electronics supply stores. Mail order form is on page 33.

² To turn the **VCR** indicator on or off in the display panel, press the **TV/VCR** button. Detailed information is on page 3.

³ If you have connected a TV monitor as shown on page 42 and set your TV to its video input channel, so you can see the signal coming in on its **AV**, **DIO**, and **VIDEO** jacks.

TV Monitor/Receiver Connections



Connecting the **AUDIO** and **VIDEO OUT** jacks of the VCR to the **AUDIO** and **VIDEO IN** jacks of a TV monitor may produce a slightly better picture during playback. To see what the VCR is doing, tune your TV monitor to the TV's video input channel.

Notes: You can also see what the VCR is doing on channel 3 or 4 of the TV monitor (whichever channel you selected with the **CHANNEL** selector on the back of the VCR) when the **VCR** indicator is on.

The **VCR** indicator does not have to be on to see the signal from the VCR on the TV's video input channel.

Normal TV Viewing (VCR Turned Off)

Operate the TV as you did before you connected the VCR. Select channels with the **CHANNEL** buttons on the TV.

Basic Playback

1. Turn on the TV and tune it to the TV's video input channel. (varies with TV's—consult your TV's owner's manual.)
2. Insert the cassette you want to play back, and press the **PLAY/X2** button on the VCR (or the **PLAY** button on the VCR's remote control).

Notes: Inserting a cassette will automatically turn on the VCR.

A cassette with its record-protect (safety) tab removed will automatically begin playback when inserted in the VCR if the **AUTO PLAY** menu is set to **ON** as described on page 15.

Recording and Viewing the Same Program

1. Turn on the TV and tune it to the video input channel.¹ (varies with TV's—consult your TV's owner's manual.)
2. Turn on the VCR and use the **CHANNEL** buttons on the VCR (or VCR's remote control) to select the channel you want to record.
3. Proceed with normal recording steps.

Recording and Viewing Different Programs

1. Turn on the TV and tune it to the video input channel.² (varies with TV's—consult your TV's owner's manual.)
2. Turn on the VCR and use the **CHANNEL** buttons on the VCR (or VCR's remote control) to select the channel you want to record. Proceed with normal recording steps and start the VCR recording.
3. Press the **TV/VCR** button to turn off the **VCR** indicator in the VCR's display pane.
4. Select the channel you want to watch by using the **CHANNEL** buttons on the TV.

Note: You can see what the VCR is recording at any time by tuning your TV to the video input channel.

¹ Optional accessory available from most dealers or electronics supply stores. Mail order form is on page 33.

² The video input channel is the channel to which you must tune your TV to see the signal coming in through its **AUDIO IN** and **VIDEO IN** jacks.

Design Specifications

Format:	VHS
Record/Playback System:	Video: 4 Head record/playback system Audio: Mono record/playback system
Video Signal System:	EIA standard: NTSC color
Antenna:	75-ohm external VHF/UHF combined antenna terminal
Tuner:	USA, 181 channels (125 cable channels) Canada, 178 channels (122 cable channels) (Chart is on page 38.)
Type:	Auto-programming frequency synthesis
Power Requirement:	120V AC, 60 Hz
Power Consumption:	19 watts
Dimensions:	3.5 inches high 15 inches wide 11.2 inches deep
Weight:	8.4 pounds
Storage Temperature Range:	- 22°F to +149°F
Operating Temperature Range:	+41°F to +104°F

Specifications and features are subject to change without notice

Limited Warranty

What your warranty covers:

- Any defect in material or workmanship

For how long after your purchase:

- Ninety days for labor charges.
- One year for parts.

The warranty period for rental units begins with the first rental

What we will do:

- Pay any Authorized RCA VCR Servicenter the labor charges to repair your VCR.
- Pay any Authorized RCA VCR Servicenter for the new or, at our option, rebuilt replacement parts required to repair your VCR

How you get service:

- Take your VCR to any Authorized RCA VCR Servicenter To identify your nearest Authorized RCA VCR Servicenter, ask your dealer, look in the Yellow Pages, or call 1-800-336-1900.
- Show the service technician your evidence of purchase date.
- Pick up your VCR when repairs are completed

What your warranty does not cover:

- Customer instruction. (Your Owner's Manual clearly describes how to install, adjust, and operate your VCR. Any additional information should be obtained from your dealer.)
- Installation and related adjustments.
- Signal reception problems not caused by your VCR
- Damage from misuse or neglect.
- Cleaning of video/audio heads.
- Remote control batteries
- A VCR that has been modified or incorporated into other products or is used for institutional or other commercial purposes
- A VCR purchased or serviced outside the USA

Product Registration

- Please complete and mail the *Product Registration Card* packed with your set. It will make it easier to contact you should it ever be necessary. The return of the card is not required for warranty coverage

How state law relates to this warranty:

- This warranty gives you specific legal rights, and you also may have other rights that vary from state to state

If you purchased your VCR in Canada:

- The Canadian warranty applies in place of this warranty

Cleaning the VCR

Dust exposed surfaces as required, using a soft cloth or the dusting attachment of your vacuum cleaner. Occasionally use the vacuum cleaner to remove dust from the ventilation holes on the top, back, sides, and bottom of the cabinet.

Some of the plastic surfaces are easily scratched, and they can be marred by alcohol and various solvents. Avoid excessive

use of oil based furniture polishes since the materials used in the cabinet are non porous and the residue will accumulate more dust. We recommend using a non-abrasive, anti-static cleaner and polisher such as AH035 shown on page 32

Trouble Checks

Sometimes problems can be easily solved by checking a few basic things. Check below before you call for help or take your VCR to an Authorized RCA VCR Servicer.

It could save you time and money. If service should be necessary, Authorized RCA VCR Servicers are trained and equipped to furnish it.

Trouble	Checks and Adjustments
No Power	<ul style="list-style-type: none">• Check to see if the VCR is plugged into an operating outlet.
Does Not Respond to Remote Control	<ul style="list-style-type: none">• Weak battery in remote control• Remote control not aimed at the VCR or there is an obstruction between them• Check setting of <i>REMOTE (VCR1/VCR 2)</i> menu. <i>Details are on page 15.</i>
Remote Will Not Operate VCR with <i>VCR 1</i> Button	<ul style="list-style-type: none">• <i>REMOTE (VCR1/VCR2)</i> menu set to <i>VCR2</i>. Press <i>VCR 2</i> button, or change <i>REMOTE</i> menu setting to <i>VCR1</i>. <i>Details are on page 15</i>• Check batteries in remote control
Poor or No Picture for Normal TV Viewing	<ul style="list-style-type: none">• <i>VCR</i> indicator is on. Press <i>TV/VCR</i> button to turn it off• TV monitor set to "video input". Switch TV to an active channel• Carefully check antenna connections.
Snowy or No Picture During Playback	<ul style="list-style-type: none">• Press one of the <i>TRACKING/V LOCK</i> buttons on the remote control to adjust tracking• <i>VCR</i> indicator not on. Press <i>TV/VCR</i> button to turn it on• Make sure the TV channel selector matches the channel you have selected with the <i>3CH 4</i> switch on the back of the VCR (3 or 4)• Make sure the TV is fine tuned• Check the video cable connections between the VCR and a TV monitor• Make sure the TV monitor set to the "video input" channel• Try another tape• Dirty tape has left deposits on VCR's heads. <i>See page 16 for head cleaning</i>• Some snow/streaks are normal during search, frame advance, and stop-action playback.
Streaks in Picture During Normal Playback	<ul style="list-style-type: none">• Press one of the <i>TRACKING/V LOCK</i> buttons on the remote control to move streaks up or down and out of the picture• Tape stretched (poor quality or worn out).
Will Not Record or Play	<ul style="list-style-type: none">• No cassette in VCR.• Eject and re-insert cassette• Broken tape—try another cassette

Trouble Checks (continued)

Trouble (continued)	Checks and Adjustments (continued)
Will Not Record	<ul style="list-style-type: none"> • VCR is in pause mode. Press the <i>PAUSE</i> button. • Record-protect (safety) tab removed from cassette. • Make sure the line indicator (<i>L</i>) is turned off in the VCR's display panel for normal recording from the VCR's tuner. Press the <i>INPUT</i> button on the remote control to turn off the line indicator.
Timer Recording Not Made	<ul style="list-style-type: none"> • Program entered incorrectly (wrong channel or times). • Power interruption. (Clock on the VCR's front panel will show "--:--".) • Clock was not set accurately (check AM or PM). • Program exceeded tape's length or tape was not rewound beforehand. • VCR was not turned off at the time recording was to start. • No tape in VCR or cassette's record-protect (safety) tab broken off.
Tape Stops Before Complete Rewind	<ul style="list-style-type: none"> • Press the <i>MEMORY</i> button on the remote control to turn off time counter's memory-stop feature, or press the <i>REWIND</i> button again. Tape rewinds only to "0:00:00M" when memory stop is turned on. <i>Details are on page 19.</i>
Rewind Does Not Operate	<ul style="list-style-type: none"> • Tape already rewound.
Clock Shows Incorrect Time or Date	<ul style="list-style-type: none"> • Power interruption. (Clock on the front panel will show "--:--".) • Clock was not set accurately (check AM or PM).
VCR Makes Noise When Stopped or Turned Off	<ul style="list-style-type: none"> • VCR is removing the tape from the heads. This is normal. The cylinder head inside the VCR will continue to rotate for about 10 minutes after you put the VCR in the stop mode. After approximately 30 minutes, the VCR will completely unload the tape.
Will Not AutoProgram Active Channels Correctly	<ul style="list-style-type: none"> • Check antenna connections. • <i>NORMAL/CATV</i> menu is not set correctly. Set to <i>NORMAL</i> if you have connected a home antenna or set to <i>CATV</i> if you have connected a cable-TV system. <i>Details are on page 4.</i>
Tape Plays Back in Slow Motion	<ul style="list-style-type: none"> • Press the <i>PLAY/X2</i> button on the VCR (or <i>PLAY</i> button on the remote control) to return to normal playback.

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Printed in Japan
Part Number 92-VR512A-1

VQTS2736 (A)